



MANUFACTURERS' RECORD.

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

VOL. XII. No. 6.
WEEKLY.

BALTIMORE, FEBRUARY 27, 1902.

\$4.00 A YEAR.
SINGLE COPIES, 10 CENTS.

Manufacturers' Record.

RICHARD H. EDMONDS, President.
THOMAS P. GRASTY, Vice-President.

OFFICE: MANUFACTURERS' RECORD BUILDING
BALTIMORE.

PUBLISHED EVERY THURSDAY BY THE

Manufacturers' Record Publishing Co.

RICHARD H. EDMONDS,
Editor and General Manager.

THOMAS P. GRASTY,
General Staff Correspondent.

SUBSCRIPTION, - - - \$4.00 a Year.
To FOREIGN COUNTRIES, - - 20s. 6d. a Year.

BALTIMORE, FEBRUARY 27, 1902.

COPY FOR ADVERTISEMENTS.

Advertising copy (changes or new advertisements) should reach us Saturday Morning to insure insertion in the issue of the following week.

For the first issue in the month we should receive copy by Friday Morning of the week preceding.

In reproducing from the Manufacturers' Record in its column devoted to industrial matters the recent interview with Senator Mark Hanna on the South's interest in the development of American shipping, the New Orleans Picayune says:

Whatever views one may have regarding Senator M. A. Hanna's politics, there can only be respect for his business acumen and success. It is therefore with interest that one reads the interview with him printed in the last issue of the Manufacturers' Record. This enterprising journal sent Albert Pheas, a capable and reliable writer, to obtain from the Senator his views on Southern progress, and Senator Hanna, being interested in shipbuilding, naturally chose to look at the subject from that point of view.

Quite extensive extracts from the interview follow, and in conclusion the Picayune says:

These considerations, in Senator Hanna's opinion, support the proposed shipping subsidy. The Senator's remarks, however, are applicable to broader issues than the one he has in mind. The development of New Orleans as a shipbuilding center is naturally suggested in this connection, and the various points which Mr. Hanna notes seem so many convincing arguments in favor of the extension and improvement of the facilities which now exist in this city for that end.

SANITY IN MISSISSIPPI.

The Mississippi senate has very sensibly killed a new anti-trust measure. A week ago it was defeated, and the unsuccessful effort to get it up for reconsideration brought out some exceedingly sane remarks. One speaker asserted that the attorney-general had reached the conclusion that the present anti-trust law could not be enforced, as if promoters of such measures really expected them to hold water in the courts; another said that the proposition was really an anti-corporation, and not an anti-trust bill, and a third expressed the belief that the killing of the bill "was a rebuke to the retrogressive demagogic spirit that had retarded the progress of the State." The vote upon the motion for a reconsideration was a tie, which was broken by the

FOR PRACTICAL EDUCATION IN THE SOUTH.

In his first message to the Virginia assembly Governor Andrew J. Montague made valuable suggestions, which, if made effective by legislation, will do a hundred times as much good as all the talk in the world upon the topic of general education. He called attention to the changes which have been wrought in the State during the past thirty-five years, insisted that these changes have brought about new conditions which must be met with courage, energy and intelligence if the Commonwealth is not to lag in civilization, and said:

Education for speculative thinkers and professions will not save the people. But few of the many who ever enter public schools make their living other than by the use of their hands and eyes. Why not, therefore, educate those faculties and members which produce the substance and comforts of life? Such education is not merely material. Upon labor all civilization primarily rests, and the education of this labor will teach knowing by doing and blend science with art. It will beget habits of order, accuracy, industry and intelligence; it will produce contentment and develop skill and productive power; it will dignify labor and energize the creative forces of society. These momentous needs can be greatly facilitated, if not accomplished, by some forms of industrial education. Ample experience affords indisputable proof of the practical and ethical value of this form of education, which in some of its branches may be introduced into many of our public schools with little, if any, additional cost, and in a few years we shall have a system of teaching that will popularize the free schools and powerfully advance the State.

The first step toward the consummation of this is the procurement of competent teachers. Blacksburg and Hampton are already giving us some of these teachers. I would recommend the introduction of industrial teaching and training into all the normal schools of the Commonwealth. These are the sources whence alone must come the teachers who are to inaugurate and carry forward this great educational reform, and I would earnestly recommend that you authorize the State board of education to take such steps as may be necessary to ingraft some forms of industrial and manual training upon the free-school system.

This is advice upon the right lines. It is strictly in accord with the earnest campaign which the Manufacturers' Record has been making for industrial training of the white children of the South. The address in which that campaign was mapped has received the endorsement of leading Southern educators. In order to promote the good work still further, the letters and articles bearing upon it which have been published from time to time during the past two or three months in the Manufacturers' Record will be reproduced in pamphlet form for general distribution.

vote of the presiding officer, who took the ground that he favored encouraging capital to come into the State. Mississippi's legislature has, during this session, given distinct evidence of the possession of more than usual common sense. The remarks of the senators who opposed the latest attempt at demagoguery ought to be printed in full and brought to the attention of the legislators in two or three other Southern States.

HINTS FOR AMERICAN COMMERCE.

For several years Mr. Frederic Emory, chief of the bureau of foreign commerce of the Department of State, has written a comprehensive review of the world's commerce as an introduction to the valuable publication known as "Commercial Relations of the United States." This year's review, summarizing, as it does, the notable manifestations in this country's trade with foreign parts, shows a grasp of the situation and a comprehensive method of handling details which must prove of value to everybody interested in the development of American commerce. Mr. Emory explains the figures of the Treasury Department, which show apparently a considerable falling off in the total value of manufactured goods sent abroad, but he makes the point that while the aggregate of our exports of manufactured goods has shrunk, the variety of our sales in Europe is extending and the territory in which they find markets is steadily enlarging, notably in Austria-Hungary and in Germany. It is quite significant that the United States is now selling to Europe goods which once were imported from there, and Mr. Emory assumes, and as-

sumes quite correctly, that European buyers are not less, but more favorably inclined to goods of American origin, and that the falling off in our exports of the kind, as far as the buyers are concerned, may be attributed to temporary causes, such as business depression, falling prices and discrimination. But Mr. Emory writes:

Notwithstanding the continued spread of our goods in Europe, and the deductions to be made from the Treasury figures on the score of accidental or natural causes of decline in manufactured exports, it is evident that the "American invasion" of Europe has ceased, for the time being, to be of the sweeping character that distinguished it at first as an economic phenomenon. Our advantages in industrial competition in the abundance and cheapness of raw material and fuel, in the superior efficiency of our skilled labor, in the unexampled fecundity of our people in the invention of labor-saving machinery and the advances we are constantly making in economies of production are still the subject of much anxious speculation in the great industrial centers of Europe, but there are some foreign observers who are encouraged by recent developments to hope that conditions may be more nearly equalized by the substitution of new processes and improved machinery modeled on our own and the adoption of legislative measures aimed especially at our goods. It was pointed out in the Review of the World's Commerce a year ago that in the reports of the consular officers for 1900 there ran "along with a common note of satisfaction a warning here and there of a more strenuous competition, which, in the end, may counterbalance our superior advantages to a considerable extent and check our progress in the world's markets unless we equip ourselves in the meantime for the ultimate phases of the struggle." As yet it cannot be said that Europe has made any sensible progress in actual performance toward more strenuous competition. The measures adopted thus far are almost wholly tentative or preparatory, and it may be that those which involve restrictive legislation will be abandoned if the United States should consent to modify its

tariff policy and permit the importation of a larger volume of European goods in return for similar concessions.

Mr. Emory quotes the London Times' argument of a few weeks ago that the United States had reached the top wave of commercial prosperity, but he adds:

Whatever be the force of these conclusions, they do not necessarily detract from the efficiency of the United States as a competitive force in the world's markets, for they do not in any way affect the advantages peculiar to us as an industrial nation, and if they did, they would be offset by drawbacks such as insufficient supplies of raw material and fuel under which the other manufacturing countries must, in the very nature of things, continue to labor. Moreover, it will probably be a long time before the conservative, slow-moving industrial forces of Europe will adapt themselves to the novel requirements which American ingenuity and enterprise have created. Both labor and capital in Europe would seem to have a long and difficult task ahead of them before they shall have approximated to the economies of production which we have mastered.

Mr. Emory believes that, in spite of our success, we have hardly begun to fit ourselves for international competition in trade. He suggests, as part of the necessary equipment, the establishment of sample warehouses and agencies at important trade centers, the employment of commercial travelers conversant with the language, customs and trade usages of particular countries, the offering of more liberal credits, the adoption of proper methods of packing and the development of adequate banking and transportation, and he adds:

It is encouraging to note that the people of the United States are becoming more and more sensible of the value of foreign trade and the importance of intelligent and well-directed efforts for its expansion. The growth of popular comprehension and approval is illustrated not only by the establishment of commercial museums, the organization of export associations, the demand for the creation of a separate department of the federal government having special charge of industry and commerce, and for the improvement of the consular service as an agency of commercial expansion, but also by the fact that our educational institutions, one after another, are rapidly adopting commercial instruction as an important feature of their work. Even the ordinary high schools are engraving commercial geography upon their courses, and during the past year the bureau of foreign commerce has received applications from teachers and scholars in many parts of the country for copies of monthly and other consular reports as aids in this branch of study. The requests for information as to trade conditions in foreign countries from manufacturers and exporters have multiplied rapidly, and it may now be said that there is hardly an important business concern in the United States having a present or prospective interest in foreign trade which does not avail itself of the data furnished by the consular service.

There is a great deal of practical sense in all that Mr. Emory writes. But he fails to refer to one powerful influence in the development of public interest in American trade, to wit, the publication daily of the advance sheets of consular reports by the bureau of foreign commerce, edited with intelligent appreciation of the necessity for prompt information from the outposts of American trade, and the value of suggestions thus given of the possibilities of greater advance.

OUR TWENTIETH ANNIVERSARY NUMBER.

Expressions of Encouragement and Commendation from Individuals and the Press.

The twentieth anniversary number of the Manufacturers' Record, issued last week, has been given a most gratifying reception, fully repaying the efforts sustained through several months to present to the country a publication that would be at once an authoritative review of the wonderful progress made by the South during the last quarter of a century, and a work of reference valuable for many years to everybody interested directly or indirectly in the prosperity of that section. Letters of an exceedingly flattering nature have been received by the Manufacturers' Record, and the press of the country has been generous in reference to it. A number of these tributes that are deeply appreciated by the Manufacturers' Record, and which encourage it to renewed efforts in the field which it has made for itself, follow:

Sumptuous Not Too Strong.

Hon. James Wilson, Secretary Department of Agriculture, Washington, D. C.: "Sumptuous is not too strong a word to characterize this whole anniversary number. It is a very admirable piece of printing, and reflects great credit on your energy and the resources of your establishment."

A Volume of History.

John Skelton Williams, president Sen- board Air Line, Richmond, Va.: "I congratulate you most heartily upon this splendid exposition of Southern growth and development. This issue of the Manufacturers' Record is a volume of history."

Information of Progress.

Hon. William R. Merriam, director census office, Washington, D. C.: "You are to be congratulated in getting out a number which gives so much information concerning the progress of the South during the past twenty years. The edition is a nice exhibition of the printer's art."

S. N. D. North, chief statistician for manufactures, census office, Washington, D. C.: "I beg to congratulate you upon the fine presentation the twentieth anniversary number of the Manufacturers' Record makes of the industrial resources and progress of the South."

Up to Expectations.

Col. Alfred B. Shepperson, New York: "Your anniversary issue, now that it has been printed, I find up to expectations. It gives more information about the South than anything I know of, and I hope it will have the wide circulation that it deserves."

A Gem.

Col. J. B. Killebrew, Nashville, Tenn.: "The twentieth anniversary number of the Manufacturers' Record reached me today, and I cannot express my high estimate of its value. It is the finest publication that I have ever seen treating of the actualities and possibilities of the South. It is an encyclopedia of everything which an intelligent man wishes to know about the material interests of the South. It is a gem. Since it came I have done nothing else except to turn over the pages to look at the statistics and to compare the results. And though I have been pretty fairly acquainted with the progress which the South has made since the termination of the Civil War, I am amazed and astounded to see how many industries have grown up from nothing to Herculean proportions. That was a happy thought of yours to have a twentieth anniversary number. Like all your work, it is totus teres atque rotundus. It is a triumphant

success, and should reflect honor for many years upon the enterprise of the Manufacturers' Record. I congratulate you from the bottom of my heart, and feel some pride that I have contributed in a small way to this great publication."

Work for the South.

Edward H. Thomson & Sons, bankers and brokers, Baltimore: "We extend our congratulations to the paper, and wish it the success in the future that it has enjoyed in the past. We feel at liberty to say, from personal observation, that the Manufacturers' Record, through able management, has done more for the prosperity of the South than any other paper in the United States. Our wishes are that it may continue its success."

Told by Authorities.

William Ingle, cashier Merchants' National Bank, Baltimore: "You have been most successful in getting together under one cover expressions from those best qualified to speak in the several departments most closely in touch with your particular clientele, and I do not doubt the benefit both your friends and the Manufacturers' Record will receive from the publication."

Doing Great Work.

John Lowndes McLaurin, United States Senate, Washington, D. C.: "I want to congratulate you on your magnificent issue of the twentieth anniversary of the Manufacturers' Record. It is one of the handsomest editions of the kind I have ever had the pleasure of seeing. I am very much interested in the composite picture, and would like to know some time from what photographs it was made up. It shows a face of wonderful strength and breadth. You are certainly doing great work, and it will be a pleasure for me to assist you in any manner I can."

A Wonder.

Hon. Chauncey F. Black, York, Pa.: "This issue of the Manufacturers' Record is a wonder. I sent it to my son at Beaumont, as I send every weekly issue, where I suppose it passes around among his fellow-workmen."

A Magnificent Edition.

S. B. Alexander, Jr., Co., engineers and manufacturers, Charlotte, N. C.: "I write to offer my congratulations on your getting out such a magnificent edition. The paper is well up in every department, and it is a great credit in every respect."

An Unqualified Success.

C. F. Z. Caracristi, C. E., M. E., Jackson, Ala.: "I wish to avail myself of the pleasure of complimenting you on your efforts and the unqualified success achieved. From the design which embellishes the cover to the last article in the issue there is an atmosphere of superlative success and of value seldom, if ever before, pervading an industrial publication. The strength and power from a scientific standpoint of the two articles on petroleum by Dr. David T. Day and Professor Oliphant reassert the great ability of the two writers. I was glad to be a contributor in my always humble way to an issue to which Professor Oliphant, who is unquestionably the best-informed petroleum expert in America, has also contributed, as well as Dr. Day, whose technological ability is of notable international fame. Among the other valuable articles I note one from my old friend, J. Stephen Jeans, Esq., of London, who in the past has demonstrated his strength of character

and his knowledge by warning the British public against being satisfied with grandfather methods used in the iron, steel and coal industries of Europe. Always a powerful writer, he has added spirited and convincing argument in his article in the Manufacturers' Record."

A Magnificent Work.

Harrison J. Barrett, Baltimore, Md.: "I congratulate you upon the magnificent work that you have accomplished."

Valuable for Reference.

William A. Calhoun, C. E., president Buffalo & Niagara Investment Co., Buffalo, N. Y.: "Please accept my most sincere thanks for the Manufacturers' Record. It gave me pleasure yesterday to digest the contents, and it is certainly a collection of facts and statistics that every man interested in the South should have conveniently near to him for reference. Certainly such efforts on your part to place the interests of the Southern States before the world should be appreciated by every one having money to invest or invested capital south of Mason and Dixon's line."

Fund of Information.

John A. Roebling's Sons Co., iron and steel wire rope, Trenton, N. J.: "We have received a copy of your twentieth anniversary number, and congratulate you upon its artistic appearance and the interesting and valuable fund of information presented in its columns."

A Creditable Creation.

Justus E. Ralph, secretary the American Cotton Oil Co., New York: "We congratulate you upon the very creditable number which you have created."

The South's Average Worker.

New Bedford (Mass.) Evening Standard: "The Manufacturers' Record of Baltimore, in its twentieth anniversary number, tells a story of the South's progress in the score of years that must bring immense satisfaction not only to the South, but to the whole country. While the population has increased 44 per cent., its productive capacity per capita has advanced 84 per cent. The value of the mineral products has increased 576 per cent., of the agricultural products 110 per cent., and of the manufactured products 220 per cent., the increase in the total value of all products being 106 per cent. Back of these achievements have been men. What is the type of man, the Manufacturers' Record asks itself, that has been foremost in the movement for Southern development and prosperity? And it has turned averages to unique account to furnish an answer to this question. Taking twenty Southern men, all of them born, living and laboring in the South since boyhood, and twelve of them still in the State of their nativity, whose manhood has been occupied in building and extending railroad systems, in cotton manufacturing, in conducting the iron and steel industries, in furthering commerce, in mining and in financing great developmental undertakings, in exerting intelligently and persistently such energy as has brought the South to its present gratifying status, it has had made a composite photograph which it believes fairly pictures the average Southern leader. Whether it does or not, it has resulted in an exceedingly interesting picture. The ages of the twenty men ranged from thirty-six to seventy years. The average man—the composite—has the countenance that should go with the average age of the twenty men. As reproduced in the Manufacturers' Record, he is a man of about fifty-two, with the sturdy, self-reliant expression and the dignity and determination that must have been the characteristics of the men who have worked against tremendous odds. The twenty were but representatives of

the hundreds who have worked equally well. The composite picture is the representative of the twenty. Averages must never be mistaken for anything but a middle stand between extremes, and they must many times be entirely without value; but this average worker for Southern development certainly pleases the fancy. He is in the prime of life, with the strong promise of greater success; he weighs 175 pounds, the average of the twenty weights, which ranged from 138 to 216 pounds, and he stands five feet ten inches tall, the average of the heights, which ranged from five feet four and three-quarters to six feet one—weight and height guaranteeing longevity and physical endurance. The deductions are the Manufacturers' Record's, and they are as interesting as the averages."

The South Up to Date.

Baltimore News: "The twentieth anniversary number of the Manufacturers' Record is a publication that should be read and preserved by every person interested in the progress of the South. The period covered is that of the South's great development, of which Mr. Richard H. Edmonds has been the prophet and the recorder. From time to time during these two decades the editor of the Manufacturers' Record has brought together in complete form the facts about the South's progress, and the anniversary issue is the latest and best of his several efforts. It may well be called the South up to date. Baltimoreans, especially, have every reason to be interested in and gratified with the product of Mr. Edmonds' ceaseless energies, and every business house in the city having relations with the great Southern country of which Baltimore is the natural commercial capital would do well to adopt the Manufacturers' Record's anniversary edition as a book of reference and education on the subject of the South. In every department of commerce Baltimore should be Southern headquarters, as it has become in the matter of collection and dissemination of information through the well-directed activities of the Manufacturers' Record. The South itself is obliged to come to Baltimore to find out the good things it has been doing."

Most Valuable of Its Kind.

Newport News (Va.) Press: "The Manufacturers' Record celebrates its twentieth anniversary by publishing a special section entitled 'Two Decades of Southern Progress.' In a medallion on the handsome cover the contents are again indicated by the words 'The story of the South's progress during the last twenty years as told by the world's most noted authorities.' This cover, by the way, is artistically striking. Around the periphery of the medallion are the abbreviations of the names of the Southern States, placed as the letters upon a dial of a watch. On one side of the medallion stands the figure of a woman, typifying, we assume, Progress. She bears aloft representations of great industries—elevators, piers and warehouses, logging trains, factories, etc. At her side an oil derrick is upreared. Near by, in a brazier, the fires of Progress are kept burning, and at the foot of the brazier are the hammer, the anvil and the cogged wheel. The publication is unquestionably the most valuable of its kind ever issued in the South or about the South. The special section, which is, of course, also accompanied by the interesting regular publication, contains ninety-two pages, exclusive of forty-eight pages of advertising. The section is printed on handsomely calendered paper, two double-width columns to the page. It is artistically illustrated, many of the special articles being accompanied by portraits of their authors. * * * It is needless to add that the publication is vastly credit-

ble to the Manufacturers' Record, and a copy of it should be in the office of every progressive Southern or Northern business man."

An Honor to Baltimore.

Baltimore American: "The Manufacturers' Record, of which Mr. Richard H. Edmonds is the editor and general manager, has issued, in honor of its twentieth anniversary, a special number, which contains a remarkable record of 'Two Decades of Southern Progress.' The anniversary feature is Part II of the weekly issue, and is gotten up in superb style, with a very appropriate design for the cover, and with typographical work and half-tone illustrations that could not be surpassed. In an editorial, touching upon the anniversary, Mr. Edmonds says: 'Twenty years ago the Manufacturers' Record was born. It was started with a view to giving its energies to the industrial upbuilding of the South, and in commemoration of its twentieth birthday this anniversary number is issued, in order that the most noted authorities of the country may tell the story of what progress the South has made during the last two decades, and to set forth the reasons why it has the inherent strength to make still more rapid advance as it moves forward to that summit where peace and plenty for all its people shall be found more abundant than anywhere else on earth.' That story is not only told well, but is told by men who are entitled to speak and write on the important subjects they discuss. Among the contributors to the Manufacturers' Record's anniversary number are such authorities as Hon. Abram S. Hewitt, James H. Eckels, ex-comptroller of the Treasury; J. Stephen Jeans, secretary of the British Iron Trade Association; O. P. Austin, chief of the bureau of statistics; M. E. Ingalls, president of the Big Four Railroad; Hon. James Wilson, Secretary of Agriculture, and many more of equal prominence, well fitted to write upon the development, resources and future of the South. The Manufacturers' Record has thus issued an anniversary number of permanent value, one that will remain an unquestioned authority on the problems which are discussed within its pages. The work does honor not only to the Manufacturers' Record, but to the city in which it is published."

Perseverance for the South.

New York Journal of Commerce: "Congratulations are due the Manufacturers' Record of Baltimore on the publication of its twentieth anniversary number. In spite of its youthfulness, no paper has shown more perseverance and ability in bringing to public attention the resources and industrial progress of the South than the Manufacturers' Record. It is fairly entitled to and has received a large measure of success for its efforts in this direction, being beyond question the best general source of information concerning Southern industry. The anniversary number is a story of Southern progress during the last twenty years, written by prominent public men and well-known specialists. Among its contributors are Hon. Abram S. Hewitt, ex-Comptroller James H. Eckels, James M. Swank, Chas. A. Schieren, Theo. C. Search and many others. It is prepared in excellent typographical form, and reflects the usual enterprise of its editor and manager, Richard H. Edmonds."

For Serious Consideration.

Wheeling (W. Va.) Intelligencer: "The Manufacturers' Record of Baltimore of last week's issue celebrates the twentieth anniversary of the founding of the journal. It is the most conservative and quite the most intelligently edited trade and industrial publication of the whole South, if

not of the country, and the Intelligencer can heartily recommend it to the serious consideration of its readers, be they democrat or republican. The most unique feature of the anniversary number of the Manufacturers' Record, perhaps, is the composite photograph it prints of leading Southern men."

No More Valuable Number.

Norfolk (Va.) Virginian-Pilot: "The Manufacturers' Record of Baltimore issues a twentieth anniversary number, devoted to an outline of 'Two Decades of Southern Progress,' that should be read by every man interested in the industrial development of the South. No one publication has done so much to promote that development as the Manufacturers' Record, and in all its history it has gotten out no more valuable number than this. There isn't a phase of our industrial development that the Manufacturers' Record does not cover by experts. It is an achievement upon which we felicitate our contemporary."

An Impressive Picture.

New Orleans Picayune: "The Manufacturers' Record of Baltimore, Md., published Saturday last a handsome two-section number, commemorative of its twentieth anniversary. In this interesting number will be found articles by twenty-five or thirty of the foremost men in the country, all bearing upon the resources, progress and prospects of the South. It is impossible in the present space to do justice to the variety and interest of the facts and figures thus presented, but the enterprise which has suggested the publication, and the judgment which has presided over the arrangement and selection of the contributions, is worthy of remark. Governor Heard contributes a valuable article on 'Louisiana's Prospects for 1902.' Professor Stubbs writes of the sugar interests of the South, and Will M. Steele of the Picayune's local staff furnishes an elaborate account of the growth of the rice industry in Acadia parish, Louisiana. But for the reader of this department of the Picayune a special interest attaches to Edward Ingle's article on the 'Realism of Southern Dreams of Material Progress.' * * * It is certainly an impressive picture of the resources and energy of the South which is exhibited in this anniversary number of the Manufacturers' Record, the best feature of which, however, is its promise of a still greater growth in the future."

Wonderfully Attractive Compendium.

Richmond (Va.) Dispatch: "The Baltimore Manufacturers' Record for this week consists of two parts. Part I is the regular issue and Part II is the twentieth anniversary feature, which contains a wonderfully attractive compendium of the South's resources, recent growth and future possibilities. Many men of national reputation are among the contributors to it. Ex-Governor Tyler furnishes an article descriptive of Virginia's agricultural and industrial growth. Mr. Ingalls, president of the Big Four Railroad system, has one entitled 'Ten Years of Railroad Growth.' Mr. Edward Ingle discusses the 'Realism of Southern Dreams of Material Progress.' We mention but a few of the many interesting and edifying articles. The editor's resume of the whole exhibit we regard as of special value."

Secretary Wilson of the Department of Agriculture, Dr. H. W. Wiley, chief of the bureau of chemistry of the Department, and Dr. W. C. Stubbs, director of the Louisiana sugar experiment station, are expected to make a trip early next month through Florida and Georgia for the purpose of studying the cane-sugar possibilities of those two States.

WEST VIRGINIA MAKING RAPID STRIDES.

Developmental Undertakings in Many Parts of the Mountain State.

[Special Correspondence Manufacturers' Record.]

Charleston, W. Va., February 26.

While so rich in coal is West Virginia that she is attracting the attention of the whole coal world, yet it is on her great natural-gas supply that she is now chiefly relying in her desire to induce the location of industrial institutions. I hear of some towns in the State which propose to guarantee a sufficient supply of gas at a low figure for a term of years, and here in Charleston the Chamber of Commerce is holding itself in readiness to reach out after many kinds of industries in case an expected supply of natural gas materializes. The Big Sandy Oil & Gas Co. has secured 20,000 acres about twenty-five miles away, at the junction of the Chestnut Ridge and Burning Springs anticlinal lines, and reports the development of five wells, with a total production of 14,000,000 cubic feet of gas every twenty-four hours. Although this is a virgin gas field, yet high hopes are indulged in regarding it. There is said to be a pressure of 600 to 700 pounds, and the depth at which gas was found, 1900 feet, gives assurances of permanency and steady flow. As no "dusters" were encountered, the five wells being all that were sunk, the company expects to be able to develop a daily capacity of 100,000,000 cubic feet. Under the rule of drawing on but one-fourth of the capacity to insure the desired permanency, this would give a daily available supply of 25,000,000 cubic feet. It is figured by the company that there are as many heat units in 10,000 cubic feet of gas as in a ton of coal. A price of eight cents a foot is contemplated, making the gas equivalent to 80-cent coal, and providing a supply equal to 2500 tons of coal per day. It is figured that with economical handling the field will be good for twenty years, and when developed would attract to Charleston glass factories, potteries, woodworking establishments, and even steel works, sites for which are available in a tract of level land contiguous to the city, and known as Kanawha City. And, by the way, in these mountain towns the question of eligible locations is an element to be reckoned with. The limitations in this direction are responsible for an activity something akin to a genuine land boom, which I have heard of as prevailing in several West Virginia cities.

This gas company announces that it expects to begin laying its pipes in March, when it will make contracts with consumers, proposing to begin supplying gas in ninety days thereafter.

An interesting fact in connection with the field from which this supply is to be obtained is that the Burning Spring was so named by George Washington, who located lands near Charleston in 1775 and dedicated to public uses as a park an acre on which is the "Burning Spring," it then being considered a wonder of nature. Here the gas, escaping to the surface through the water, could be set on fire and would burn until extinguished by a gust of wind. This is said to be the first discovery of natural gas in this country, the value of which was not understood until a century later.

One of the points relied on by Charleston as an attractive location for industries is its favorable situation as to railroad and water transportation. The system of locks and movable dams established in the Kanawha river by the government give navigable water even when the Ohio is at a low stage. This was illustrated some

time ago, when a fleet of coal barges was sent down the river to Cincinnati, while Pittsburg's barges were laid up high and dry. The Ohio was raised between two and three feet by the water let out of the Kanawha locks, and on this tide the barges floated down to relieve the famine which existed.

Over at the Statehouse I learned a remarkable fact. Not only is West Virginia out of debt and has never issued a State bond in its history, but there is in the treasury \$2,500,000 in cash. About \$1,000,000 of this belongs to the permanent school fund, only the interest on which is available for use, but the other represents prosperity, pure and simple. Some of it has come from the annual fees collected from corporations receiving charters from the State, and the balance is taxes collected, which never have been so promptly or so generally paid. The legislature meets during two years only, and when it adjourned last year the fear was expressed that the appropriations made would exceed the receipts. When the members come together next winter they will be confronted with a fund the vastness of which may somewhat puzzle them to dispose of.

Suggestions are made by some of the enterprising Charlestonians that a very good use to which some of it might be put would be the improvement of the roads leading into the State's capital, in order that at least the people of the county might not be storm-bound during the winter. If sufficient agitation of the subject were to be made a start in the direction of good roads—the need of which this mountainous section suggests—might be secured.

A new industry about to be set going here is interesting from the promise it gives of successfully developing heretofore neglected resources. The Kanawha & New River Brick Co. is its name, and, as indicated, the manufacture of fire-brick will be its chief undertaking. The bed of clay is almost on the townsite of Charleston, and practical tests have demonstrated to the satisfaction of the promoters that the product is the equal of any brick on the market. A plant with the most improved labor-saving and automatic machinery is being constructed, and it is to have a capacity of 50,000,000 brick a year. On the same land with the fire-clay are strata of other clays from which pressed brick, paving brick, vitrified hollowware and terra-cotta for buildings will be made. D. G. Courtney is president; State Mine Inspector J. W. Paul, vice-president; E. B. Neale, general manager, and Elijah Steen, secretary and superintendent. Men of prominence, influence and wealth are also among the directors and stockholders.

Everywhere today one hears the story that West Virginia is on a boom, purely in a development way, and a view at short range not only confirms all the stories told, but supplies details as to cases and individuals which make it seem almost as though a great golden horn of plenty had covered West Virginia and deluged all her people with its treasures. Here are some of the details:

"A" came into the coal fields of West Virginia fifteen years ago with a pick. He sold his holdings to the combine the other day for \$500,000. "B" was a day laborer at the mines a few years ago. His royalties now amount to \$1000 a week. "C"

had a lot of wild land he couldn't sell at any price till the oil men sunk a well, and now he gets \$500 a day royalty. "D," working in a position which pays him \$1000 a year salary, made \$50,000 last year on the side speculating in oil and timber lands. "E," a traveling man, quit the road a few years ago, went with a coal company, and is now worth \$750,000.

So it goes in almost endless multiplication, and with only such variation as local conditions give. In some sections coal "barons" abound, and all the talk and all the money center about coal. In Charleston, for instance, the capital of the State and the center of the important Kanawha coal district, there is so much coal money that the banks are fairly bursting with it. The deposits in that city of 12,000 people amount to \$4,000,000, or \$333 for every man, woman and child, white and black, in the community.

In Wheeling the boom in iron and steel has made scores of people wealthy beyond their dreams of a few years ago, and the prosperity of the whole community is reflected in the constant crowding of the hotels by drummers who flock in to supply the merchants' demands for more goods. This is likewise the case in the hustling interior cities of Fairmont and Clarksburg, which have wonderfully increased in population, business and wealth through coal, principally, though Clarksburg is in the center of a big gas and oil field, and it is asserted that 500 people in the city are getting royalties and rentals from oil, and 5000 in the county. The amounts range all the way from a few dollars to hundreds a day. Judge Nathan Goff is a conspicuously large beneficiary in this respect, his royalties aggregating, it is said, some \$1000 every day. In Clarksburg, too, the banks are fairly choked with money, the four banks having something like \$4,000,000 of deposits. Indeed, the banks throughout the State with \$1,000,000 deposits are rather the rule than the exception, and in all portions of the State, particularly where the combines have distributed money in payment for coal lands, or in sections where rich oil strikes have occurred, money is as plentiful as in a Klondike mining camp. Some amusing illustrations of this fact occur. For instance: A countryman was parading the streets of an oil town with a fifty-dollar bill over his ear and another in his hatband. "Is the man crazy?" asked a stranger. "Hasn't quite got used to it," explained a native. "Never saw fifty dollars till a few weeks ago. Owned a 25-acre patch of gravel you couldn't raise even a disturbance on." "Long comes an oil man, sinks a well, and now that chap and his partner gets \$80 a day apiece royalties."

Even a little investigation shows that many elements enter into the present vast prosperity of West Virginia. It isn't all luck, and it isn't all mere hard work, either. It is a combination of the general prosperity of America with the wonderful and varied natural resources of the State, together, and in no small measure, it would seem, with such legislation as invites, instead of repels, those enormous engines of achievement, the big capitalistic combinations. The Standard Oil Co. buys the product of the oil men and leases and produces on its own account; the powers behind the railroads have invested millions in the coal lands and mines of the State, and the United States Steel Corporation has put a pot of money into the steel and iron industries of Wheeling, where one of its plants employs 2200 men, and is one of the most important tubing works in the combination. West Virginia is so conspicuously liberal in her corporation laws that charters are asked for and obtained by companies doing business in all parts

of the country, from even Maine and California, and it is at least a reasonable conclusion that had there existed here the hostility to foreign corporations which some Southern States have shown, there would have been no such extensive investments and developments made by the big combinations which have come here and set the whole State in a whirl of profitable activity.

It was for so long a time that West Virginia was looked on by her sister States as a sort of frowzy, snub-nosed "Nan, the good-for-nothing" child, that even now it is hard for some of the staid and well-grounded sisterhood to realize or recognize that she has done them all in the contest for public favor, and has yet hardly more than begun to show what is in her. West Virginia is first of all the States in the production of high-grade petroleum. She takes rank as a coke-producing State, and is crowding hard the second place as a coal producer. She has more fine hardwood timber than any State, and is marketing more. The development of natural gas has tremendously stimulated the manufacture of glass, in which industry there has been a 500 per cent. increase within the past five years.

While much of the present activity in West Virginia is along the lines of marketing raw materials, and her wealth and prosperity would be greatly augmented if these elements were utilized within her own borders, there has been a very remarkable increase in industries, nevertheless, with promises of still greater development in the future. Her product of 20,000,000 barrels of oil will, of course, always mainly go to outside markets. Having some 16,000,000 acres of coal lands, as estimated, with veins from four to twenty-eight feet thick, she can spare vast quantities of her unsurpassed bituminous product to the needy countries of the globe, as she is now doing. Her 3,000,000 tons of superior coke, better even than the famed Connellsville product, can hardly hope to ever find a market for the major part of it among the industries of her own State, and there will be for years to come timber in abundance for others' uses. But with such splendid resources, and in such lavish abundance, there is vast room for the development of industries in many lines, and the wealth of today would be far eclipsed were there to be occupied half the opportunities which exist for the location of iron, steel, woodworking and many other industries. That the industrial development is going on apace, however, the investigations of State Labor Commissioner Barton most interestingly show. A report of new undertakings covering the past two years is just being put in the press by him. His figures demonstrate that \$40,000,000 were invested in various new enterprises during 1900 and 1901, and adding that to the figures given in his previous biennial report, it appears that \$65,000,000 have been thus invested in the four years since the present great activity commenced. The greatest percentage is shown in glassmaking, the great development of natural gas—some of it being furnished as low as three cents per cubic foot—having attracted not only new plants, but many of those formerly located in the waning gas fields of Pennsylvania, Indiana and Ohio. Coal and coke, lumber, and oil and gas production come next in percentage of increase in the order given.

An interesting fact in connection with the glass industry is that many of the plants being established here were former West Virginia concerns, which were tempted into Ohio and Indiana some ten years ago by the big gas strikes made there and the bonuses and free sites offered. That was before the development

of gas in West Virginia. Now that they have begun to see the end of gas for manufacturing in those sections, the great abundance of gas here has an added attraction in the fact that should the field here become exhausted, too, in the course of years, there will be an abundance of cheap fuel to fall back on, and so it is altogether likely that the glass industries have come to stay.

Glass works of various kinds are now in operation at Clarksburg, Fairmont, Wheeling, Wellsburg, Moundsville, Manington, Morgantown, Central City and Sistersville, and wherever natural gas is found or can be piped in, new enterprises of the same sort are being encouraged to locate. The industry has been further benefited and stimulated by the discovery of excellent glass sand at several places, notably near Morgantown, which has shaken off its character as a purely school town and entered the lists as a candidate for the highest industrial honors.

Standing practically in the front rank as a producer of coal, coke, oil and gas, and having in her borders timber for all kinds of woodworking, clays for potteries, fire-brick, etc., as well as other valuable raw materials, having railways and watercourses which provide easy, cheap and quick transportation to the seaports and markets of the world, it is entirely reasonable and proper to accept the enthusiastic West Virginian's estimate of the State's future, and to join him in the declaration that wealthy and busy as the State is now, it has only just started on a development which will not stop nor slacken until every well-selected site is a populous manufacturing center, and the variety and extent of her industrial activity will be the wonder of the world.

As a State West Virginia came into existence in the shock of battle. She was hurled off into the space of the maps by an explosion which convulsed the nation, just as her physical existence came into being through a world-wracking convulsion which broke up the vasty deep, parted the ancient waters and turned the ocean floor into mountain peaks and tablelands. The treasures of untimed ages were lifted into sunlight and left for use of man. So seamed and grooved was the State's surface made by the action of the glaciers, however, that the great tide of immigration passed her by, and it was chiefly as the scene of bloody feuds that the Mountain State was brought to public notice during many years. So rugged is the surface of the entire State that the map reveals her physical nature, for even here her contour reminds one of a jagged hunk of volcanic rock.

But when the needs of modern commerce began to require vast stores of coal, and cheapness of production became a factor of increasing importance, men turned to the neglected hills of West Virginia and found here an almost unbroken storehouse of bituminous riches. And much of the coal was found to have been lifted high above the valleys, so that drifting, instead of shaft mining, is the rule in the State. In 1850, when there were 30,000,000 of people in the United States, the coal production of the country was 3,000,000 tons a year. Now, with some 80,000,000, or not three times that population, the United States produces something like 225,000,000 tons, or seventy-five times as much as fifty years ago. This is what has brought the men and the millions of big undertakings into the coal fields of West Virginia, and made lands which could not be sold for \$5 an acre a few years ago bring now prices of from \$50 to \$500 an acre.

And along with this change has come a utilization of other resources heretofore overlooked or undervalued. Back in the

hills are great forests of hardwood, some oak trees being four feet and over in thickness. There are poplar, pine and spruce in other sections, and now it is said there are more men employed in the lumber industry than in coal and coke combined, and one authority estimates the value of the timber product last year at \$40,000,000. At Covington there is a very large wood-pulp mill, and at Charleston there is an institution which grinds up the wood and bark of the oak and chestnut and makes a tanning extract. Furniture factories, woodworking plants and saw-mills operate in many parts of the State, and in addition great numbers of logs are floated down the rivers to Cincinnati and elsewhere.

Fire-clays are found in seven counties, and they are being utilized to a constantly increasing extent.

Iron is found in seven counties, and is declared to be of high grade and worth the working.

Limestone, sandstone and other valuable rock formations abound.

The State is by no means barren of agricultural resources. The valleys are fertile, and many hillsides are cultivated with success and profit. The total value of farm products for 1901 is said to be \$35,000,000, \$20,000,000 of which is covered by corn, wheat, oats, hay and potatoes. Over in Randolph county there is an apple orchard of 1735 acres, containing 181,000 trees, doubtless the biggest thing of its kind in the world.

While the greatest progress in an industrial way and in general development has been in the towns and cities where coal, oil and gas have furnished the moving cause, yet in the extreme northeast there has been a development of note, Martinsburg having grown into a woolen-mill town of importance, with 800 hands employed in the industry of knitting hosiery, weaving, etc.

A steady immigration is now flowing in from the East, North and West, and it will continue to swell as the opportunities here are more widely known. The State is out of debt—never has issued a bond in its existence—and has \$2,500,000 on deposit. There is widespread individual wealth, and prosperity is visible and all-pervading. West Virginia is on the upgrade. In short, West Virginia is a hummer.

ALBERT PHENIX.

The Southern Farm Magazine.

The strenuous agitation in behalf of the industrial training of the poor white boys of the South will undoubtedly be promoted by a striking article in the March number of the Southern Farm Magazine written by Col. J. B. Killebrew of Nashville, Tenn. Typical, as he is, of the men who during the past thirty or forty years have been striving for the upbuilding and advancement of the South, Colonel Killebrew writes from an intimate acquaintance with the Southern people, and from accurate and comprehensive knowledge of the conditions confronting them. In his article he characterizes the Southern white boys as descendants of the freest of the free and the bravest of the brave, and predicts that, animated as they are by the great tenacity of purpose and devotion to principle, they will, when properly trained in industrial pursuits, lead the world in manufacturing and other enterprises requiring trained intellects. It is particularly gratifying that Colonel Killebrew discovers a great change in public sentiment regarding industrial pursuits, and the truth of his statement that trained and educated mechanics is the most powerful factor in the progress of nations is receiving every year stronger and stronger practical endorsement.

Another valuable article is the first part

of a study of the Low... This is the... and attract... the introdu... agriculture... nor of Clen... in the Sou... Stockbric... station and... and cassav... practical in... In the c... World," P... contrary-m... questions i... public atte... of the Ma... and instr... The Sou... fished mo... Record P... Price \$1 a... MAN... Evidence... (Special... Bir... The stre... veloped d... successfull... in the re... Sellers ha... ther the a... with any... desired wa... assured a... of \$12 for... satisfactor... liberally f... increasing... there was... had delay... necessities... miums fe... brought o... market on... While t... the mark... foundry, a... basis, it i... soft iron... sold at \$1... No. 3 foun... lot for de... year. It v... satisfactio... reous... offering t... too, was d... the week... the close... fast getti... spite of... For prom... quests ar... other hia... supply of... that the S... registered... for 4200... the strong... and large... Barring... pany will... summer... another c... to bid on... The bu... lands nee... sold by I... Steel &... president... anything... that the p... are rumo... eluding a... will conti... ished pro... Busine...

of a study by Dr. W. C. Stubbs, director of the Louisiana sugar experiment station, of the proper preparation of the soil. This is thorough enough as to treatment and attractive enough as to style to be the introductory chapter of a textbook on agriculture. A paper by Prof. C. M. Connor of Clemson College, S. C., on dairying in the South, with one by Prof. H. E. Stockbridge of the Florida experiment station on beef derived from velvet beans and cassava will be found of exceedingly practical interest.

In the department "Wagging of the World," Peter Pechin handles in rather a contrary-minded manner a number of questions which are at present engaging public attention. The other departments of the Magazine are full of interesting and instructive matter.

The Southern Farm Magazine is published monthly by the Manufacturers' Record Publishing Co., Baltimore, Md. Price \$1 a year.

MANY ORDERS FOR CARS.

Evidence of Activity in the Birmingham District.

[Special Cor. Manufacturers' Record.]
Birmingham, Ala., February 25.

The strength of the iron market has developed day by day of late, and it has successfully resisted all efforts to hold it in the restricted limits of quotations. Sellers have not made any effort to further the advance, and do not regard it with any complacency. What they most desired was a steady, regular market that assured a fair business profit. On a basis of \$12 for No. 2 foundry, business was satisfactory, and the market was being liberally fed. Although the demand kept increasing, the price was adhered to. But there was a large number of buyers who had delayed their purchases until their necessities prompted the offerings of premiums for desirable deliveries. This brought out some iron and started the market on the up-grade.

While the leading interests still quote the market on the basis of \$12 for No. 2 foundry, and say they are selling on that basis, it is a well-known fact that No. 1 soft iron has sold at \$14; No. 2 foundry sold at \$12.35, \$12.50 and up to \$13. For No. 3 foundry iron \$12 was bid for a round lot for delivery the last quarter of the year. It was declined, not because of dissatisfaction with the price, but for other reasons. The buyer renewed his bid, offering to take it in December. That, too, was declined. Gray forge sold during the week at \$11.25, \$11.35, \$11.50, and at the close of the week \$12 was bid. It is fast getting to be a runaway market, in spite of earnest effort to hold it down. For prompt shipment of old business, requests are importunate. But there is another hiatus in the car situation, and the supply of cars is inadequate. The fact that the Southern Car & Foundry Co. has registered orders in the last few weeks for 4200 cars, and has more in sight, is the strongest kind of evidence of the rapid and large increase in Southern business. Barring unforeseen mishaps, this company will be building cars here by mid-summer. Besides, a request was made by another company to a Birmingham firm to bid on the iron work for 1700 cars.

The buyer of the 4000 acres of coal lands near Bessemer for \$95,000, lately sold by F. B. Aldrich, was the Alabama Steel & Wire Co. Mr. George Shuler, president of the company, will not say anything of his plans beyond the assertion that the property will be developed. There are rumors of a new plant to be built, including a blast furnace, so that the firm will control its output from crude to finished product.

Business has so increased at the Dim-

mick Pipe Works as to demand increased capacity, and addition and improvements to the foundry to cost \$25,000 has been determined upon. Another firm here noted as builders of engines has secured orders for fifteen Corliss engines, varying from 500 to 100 horse-power, and more business is in sight.

Two new coal companies have been incorporated the past week, one for \$50,000 and one for \$10,000, and several of the older corporations are being compelled by increasing business to add to capacity.

The Beaumont Oil Field.

[Special Cor. Manufacturers' Record.]
Beaumont, Texas, February 25.

Mr. Herrman Kountze, one of the New York firm who recently sold the water-front at Sabine Pass to the Kirby interests, was in the city during past week, and in talking to the Manufacturers' Record correspondent confirmed the statement as far as a sale had been made, but he declined to admit that it was to the Kirby Lumber Co., and simply smiled when he was asked if that was the case. The first news of the sale came from Mr. Kirby's men, and it may therefore be regarded as authentic. It means a great deal for this section, for Mr. Kirby will undoubtedly take steps to see that Congress is shown the conditions here, and that the proper appropriations are made for it.

Mr. Tom C. Swope returned from the East this week, and announces that he has made a contract for still another refinery for Beaumont crude oil, which is to be used in making a substitute for rubber which will prove highly profitable. The plant will employ seventy-five men at the start. He will organize a company with a capital of \$1,000,000 for the purpose of handling it, and says that he anticipates no fear about the construction of the plant.

The Union Oil & Refining Co. also says it will soon begin work on its refinery, which it is thought will result in much good to the city. The stock in this latter plant has been about all taken, and home people own practically all of it. The oil is to be refined through a patented process.

The Penman tank people will start in business here with a quarter of a million dollars or more orders on their books. They have enormous tankage contracts.

The Southern Pacific began using oil on one of the switch engines here this week, and will immediately place the Sabine division on the oil basis. This is regarded as a big concession to the Beaumont field.

The oil shipments up to date for the month of February have exceeded 3500 cars, the largest for any month yet by a considerable margin. Something over 600,000 barrels have been sent away in these shipments. The month should show nearly 700,000 barrels shipped, which will exceed the average of several of the Northern fields that have been in operation for years, and the shipping facilities are anything but adequate as yet.

IMMENSE WATER-POWER.

Development Under Way by the Whitney Reduction Co.

The Salisbury (N. C.) Sun publishes an interview with Mr. E. B. C. Hambley of Gold Hill, N. C., president of the Whitney Reduction Co., particulars of which have previously been given in the Manufacturers' Record, in which Mr. Hambley gives some details regarding the great work proposed by his company. This includes the building of 6½-mile railroad, now under construction; the development of a water-power planned to give at first 20,000 horse-power, and eventually to be increased to 46,000 horse-power. The plans include the building of a dam across the river, which Mr. Hambley states will be of granite secured from the com-

pany's quarries. It will be 1500 feet long, 40 feet high and 50 feet through the base. It is proposed that the powerhouse shall be 300 feet long and 100 feet wide, and estimated to cost \$200,000, with machinery figured at \$600,000. The company has purchased about 30,000 acres of land in order to avoid any trouble with adjacent property-owners in carrying out its comprehensive undertaking. Included in this is a gold and copper mine, on which it is understood about \$250,000 have been expended in opening up the property preparatory to its larger development when the water-power has been completed. It is intended to utilize this water-power for electric transmission to Salisbury and a number of other towns in the vicinity. The capital for this undertaking has been largely secured in Pittsburg, Mr. George I. Whitney of Pittsburg being vice-president; F. L. Stephenson of Pittsburg, treasurer, and H. L. W. Hyde of Pittsburg, secretary.

THE VIRGINIA POLYTECHNIC.

Wonderful Educational Work Being Done at Blacksburg, Va.

[Special Cor. Manufacturers' Record.]
Blacksburg, Va., February 25.

This session of the Virginia assembly means a great deal to the Virginia Polytechnic Institute. On it rests her future fate. In the life of a college there is no such thing as a standstill. There must either be progression or retrogression. For ten years at the Virginia Polytechnic Institute there has been steady progression. Two years ago, when men were sleeping three in a room intended to accommodate but two; when 160 men were crowded into a classroom intended to seat 100; when classes were divided and subdivided again; when instructor after instructor was engaged to teach new men, the old State of Virginia came to the aid of her wonderful institution with an appropriation of \$100,000.

The money advanced was well expended. The capacity of the wood and machine shops was doubled, of its dormitories by 170, of its classrooms almost double, and its laboratories, physical and chemical, were largely increased. Today congestion again threatens the Institute. Not a room has less than two occupants; many have three. Not a classroom has a seat to spare. Today the actual enrollment numbers 470 men—not children, but men—and more are coming. There are eighty-four more students in college this year than there were in 1900 and 1901. There were forty-three more that year than were here in the year preceding, and an increase of forty in 1899 and 1900 over the year preceding that. In ten years the Virginia Polytechnic Institute has sprung from a badly-regulated school of eighty men to the institution that it now is, educating more Virginians every year than any other college in the United States.

This is a positive fact. There are more men from Virginia on the rolls of the Virginia Polytechnic Institute at this time than in any other institution of learning in the United States. The Virginia Polytechnic Institute, too, has the largest actual male attendance of any of the land-grant colleges in the United States. More matriculates may appear on the rolls of other polytechnic schools, but a large percent. are either ladies or children, the latter in sub-fresh classes. The fact, the great fact, remains, that the Virginia Polytechnic Institute stands ahead with more men actually on her rolls than any other land-grant college in the whole of these United States.

The legislature has been asked to appropriate \$25,000 for a new dormitory and raise the annual appropriation from \$15,000 to \$25,000.

Few people realize the need for this or the great work the school is doing. How many people in Virginia even know that at this college a man can receive a year's thorough training in almost any branch of knowledge for \$165? A mathematician is not needed to see that this sum is not applied to the support of the college. Of this amount, \$81 are paid for board, the other \$84 paying for clothes, electric lights, steam laundry service, steam heat, janitor service, uniforms, books and incidentals. The writer of this article is personally acquainted with a number of men who have gone through on that amount. A student at Cornell University this year, pursuing the most advanced work in electrical engineering, the son of a prominent Richmond clergyman, graduated from this college last year at the head of his class, with the "highest honors" it was possible for the Institute to confer upon him, after a course costing his father about \$420 in all.

Poor men's sons, men with an aptitude or skill in any kind of work, are hardly ever dependent upon their parents for support. The college has on its pay-rolls close to 100 students, who, in return for services rendered, are thus enabled to pay in full or in part the expenses of their college course. Men with mechanical aptitude secure employment in the machine shops; men naturally good at drawing are employed in the draughting department. Plumbing, pipefitting, carpenters' work, bookkeeping, instructing and a dozen other forms of work merit authoritative attention from the pay-rolls of this institution. Whenever student labor is available, cadets receive the money for the work.

The air at Blacksburg is surcharged with energy and enthusiasm. Students are attending a growing institution. The echo of the hammer, the swish of mortar, the cries of "water boy" from stonemasons and bricklayers are in the air. It is this fact that holds the faculty of the Virginia Polytechnic Institute together. It was this that made the president of the institution, Dr. John McLaurin McBryde, decline a larger salary to stay with the work of his hand, to stay with the school he built up. It is this that holds the graduates of foreign universities with this college. Five Ph. D.'s and graduates from Leipzig and other foreign universities are instructing the students at the Virginia Polytechnic Institute. It is this fact, that the Virginia Polytechnic Institute is growing, and that they are helping to make it grow, which holds the faculty. The modest salaries paid them are mere stipends to men such as these, and were the institution on a decline, instead of a grand, steady, upward rise, would hold them not at all.

The Virginia Polytechnic Institute is assuming a recognized place among the great institutions of the country. Her graduates and her students are eagerly sought. At this time Dr. McBryde has places for two men, and has offered them in vain, those to whom they have been offered politely declining in order to finish the entire collegiate course. Of the unusually large graduating class of last year hardly a fourth are here now, and these have, without exception, had lucrative offers to leave, but stay in the employ of their alma mater as instructors and to pursue advanced work. Their absent brothers are holding responsible positions. A round half-dozen underclassmen have been called away this session already to fill positions of trust and honor.

It hardly seems possible that the State legislature can overlook these facts. The committee from the senate has voted favorably on the appropriation for a barracks, and it only remains for our lawgivers to do their part and help the great school to grow. **FRANK D. WEBB.**

FOREIGN TRADE.

This department is designed to set forth opportunities for the extension of the trade abroad of American manufacturers, and to record facts about the rapidly-developing commerce of the South.

A Question from Melbourne.

In a letter to the Manufacturers' Record Alfred Champion of Melbourne, Victoria, writes: "Mr. Thomas Cooper of our city handed me a copy of the Manufacturers' Record, which I read with a great deal of interest. I propose going through America in April next, having taken my passage by the boat which is due at San Francisco at the end of March. It struck me that you might be able to give me some useful hints as to the place or places to purchase cotton duck and canvas. We have been importing cotton goods for a number of years from New York, Baltimore and elsewhere, and have built up a fair trade in these lines. We could continue to do so but for the combine among the mills, which has sent prices to almost a prohibitive point. What I should especially like to find out is if the Southern mills are included in the combine? The mills known to me are the Woodberry-Mt. Vernon, Aretas, Druid, Harvester and a few others. Are these Southern or Northern mills? The question is this: If we are to continue selling cotton goods we must find mills outside the combination. The frequent fluctuation of prices upsets us completely, and is, of course, against business. If there is a chance of finding a Southern mill, I can go and see the secretary, as I can go along the Southern Pacific route and by way of Georgia, I think. Are they represented in San Francisco? I prefer to deal straight with the mill instead of with the mill's agents, if it is possible. As I shall be free to choose my own route when arriving at San Francisco, could I serve my purpose by going the way I propose? Can I find representatives of the mills along that route, or are they located in San Francisco or New York? You will save me a deal of worry if you will kindly drop me a line, care of Spreckles, San Francisco, to reach there about March 30."

Opportunities in Russia.

In a letter to the Manufacturers' Record M. Olinsky of Moscow writes: "Different American articles, mostly in a technical line, have a great future in Russia; in fact, they are sold and used in Russia in immense quantities already. But the unlucky tariff which raised the duty on American machinery imported into Russia nearly 100 per cent, is a great drawback. There is a good field in Russia for the higher grades of American machine-made shoes. American wood and metal working machinery is also being sold in Russia in large quantities, and enjoys a well-earned reputation for quick and active work. The Germans are copying the American makes, and are turning out perfect models of American machinery in appearance, but of a much inferior make. This they sell at a much lower price, furnish quicker delivery and offer every inducement possible to draw the buyers of American machinery over to Germany for their machines. This destructive result for the American manufacturer is due in a large part to the high duty.

"There is also a very good field in Russia for petroleum and naphtha engines. I handle for a few German and English firms, but they furnish the motors at a very high price. The engines are to be worked by petroleum or kerosene in crude state, and sizes from one to 100 horsepower would meet a ready demand. I would be most glad to correspond with

American firms who wish to have their articles sold in Russia, or who desire an agent."

City Improvements at Ponce.

C. A. Teller of Ponce, Porto Rico, writes to the Manufacturers' Record that the mayor of Ponce desires catalogues of filters for the city water-works, steel road rollers, quartz crushers, etc. He writes that a big lot of work is being done on the city, and that the authorities desire to purchase machinery, etc., direct from the manufacturers. Mr. Teller himself wishes to receive catalogues of manufacturers of petroleum engines, wheelbarrows and hand-carts.

American Coal at Coburg.

United States Consul-General Oliver J. D. Hughes at Coburg, Germany, believes that American coal dealers have a good chance to gain a footing in the Coburg market, and he states that china and stoneware manufacturers in that city, including fifty-four important factories, have united to buy coal in large quantities, and suggests that American dealers communicate with Franz Ritter of Coburg.

F. J. Buchack of Madrid writes to the Manufacturers' Record that he would like to have quotations and samples of brass in tubes, bars or sheets of all thicknesses, e. i. f. Spanish ports, and also quotations on iron tubes, brass-covered, to be used in making iron beds. He is also interested in leather and in printers' supplies.

Huntsville Notes.

[Special Cor. Manufacturers' Record.]
Huntsville, Ala., February 26.

R. E. Pettus, president of the Chamber of Commerce, who is interested in the negotiations for the proposed \$7,000,000 trunk-line railroad from Cincinnati to New Orleans, announces that arrangements are fairly under way. Three prominent and wealthy Huntsville citizens will be incorporators of the line, which will develop mineral and timber resources in Kentucky, Tennessee and Alabama.

The officials of the Nashville, Chattanooga & St. Louis Railway have instructed their superintendent and engineer, Mr. Gordon D. Hicks of Tullahoma, Tenn., to begin work as soon as weather will permit on the improvements at the local depot, where a park will be established. It is reported that this road will soon make several other improvements on its line.

In addition to an expenditure of \$100,000 by the International & Great Northern Railway Co. for new freight terminals at Houston, it is reported that the company contemplates building a 40-mile branch road connecting Dallas and the new line now under construction between Fort Worth and Spring, and an extension of seventy miles from Houston to Beaumont.

The contract for 13,000,000 bricks to be used in the erection of the new building for cadets' quarters at the Naval Academy at Annapolis has been awarded to Burns & Russell of Baltimore. It is estimated that it will require sixty-five railroad trains of twenty cars each to convey the brick to Annapolis.

The Alabama Car Service Association's report for January shows that 52,671 cars were handled, an increase of 12,000 as compared with the corresponding month of last year. The annual report for 1901 shows 497,769 cars handled, an increase of 43,492 over the year 1900.

Thirty engines of the International & Great Northern Railroad are now being changed so as to burn oil for fuel.

RAILROADS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

Northern Central's Report.

The annual report of the Northern Central Railroad Co. for the year ended December 31, 1901, displays liberal gains, the gross earnings being \$8,266,957.98, an increase of \$421,546.39; the expenses were \$5,754,989.03, an increase of only \$257,451.55, and the net earnings were \$2,511,968.95, an increase of \$164,094.84, comparisons being made with the year 1900. The gross income of the road was \$3,106,275.54, an increase of \$126,207.76. Deducting from this interest on funded debt, mortgage and car trusts, rentals, taxes, etc., amounting to \$1,088,256.71 (which showed a decrease of \$594,253.26), leaves a net income of \$2,018,018.83, an increase of \$720,461.02. During the year semi-annual dividends of 4 per cent. were paid, amounting to \$916,980. The heavy increase in the net income for the year was due principally to large decreases in interest on funded debt and in extraordinary expenditures. The balance carried to the credit of profit and loss at the last of the year was \$3,345,562.67.

During the year improvements were made at the Canton yard and a new pier was constructed at a total cost of \$130,687.48. A number of other improvements have also been made on the line between Baltimore and Harrisburg. President Cassatt calls attention to the continued work of eliminating grade crossings on the Union Railroad in Baltimore and of making improvements in its alignment. He also notes the replacement of wooden bridges by steel and other structures better adapted to heavy traffic. Extensive improvements are being made on the tracks and yards at Marysville, and at Bridgeport changes are in progress to improve the connection with the Cumberland Valley Railroad. Six new locomotives of standard types were put in service to replace old engines retired, and 144 box cars, 280 gondola cars and about twenty other cars of various types were built to replace cars destroyed or sold.

Under the terms of the consolidated general mortgage the amount of bonds outstanding thereon has been reduced by the drawing of \$176,000 of securities, through the provision of the sinking fund.

The 7 per cent. bonds of the Shamokin Valley Railroad Co., endorsed by the Northern Central and the Philadelphia & Erie railroads, and amounting to \$2,000,000, matured, and were refunded at 3½ per cent., thus securing a reduction of 50 per cent. in fixed charges on that line.

The coal tonnage of the main line shows a substantial increase of 1,219,962 tons, the total carried in 1901 being 6,836,252 tons. New track was built during the year amounting to fifteen and one-half miles, and 6877 tons of new steel rails and 237,157 ties were used for repairs and renewals.

The pension rolls show that 112 employees were carried thereon, and the amount received by them during the year amounted to \$23,924. The stockholders will be asked to increase the maximum appropriation to the pension fund to \$40,000 a year, because reports show that the percentage of employees who have reached the retirement age, and who will probably avail themselves of its privileges, will be larger than was expected when the fund was established.

Into the Timber Land.

The Caldwell & Northern Railroad, now operated between Lenoir and Collettsville, N. C., has been purchased by the

Caldwell Land & Lumber Co., and is to be immediately extended from Collettsville, its present western terminus, into the tract of a little more than 43,000 acres of high-grade timber land recently purchased by the company on the eastern slope of the Blue Ridge mountains in the western part of Caldwell county, North Carolina. It is estimated by experts that this tract will saw 500,000,000 feet of merchantable timber, more than half of which is white pine and yellow poplar of superior quality. Mr. George O. Shakespeare of Norwood, Pa., informs the Manufacturers' Record that large saw-mills are to be erected on the tract, and that a wood-alcohol plant and a pulp mill are also being considered. The purchase of the tract, he adds, was made solely on account of the valuable timber, though it also contains large deposits of granite, kaolin and magnetic iron ore.

The Atlanta Viaduct.

Some time ago the city council of Atlanta appropriated \$25,000 toward the construction of a viaduct along Peters street over tracks of the Southern Railway, the Central of Georgia Railway and the Atlanta & West Point Railway companies. Last week representatives of the three railway companies agreed to contribute jointly \$35,000 cash toward the cost of the viaduct, provided the city authorities shall agree before April 1 next to build the viaduct, beginning not later than May 1 and completing it by April 1, 1903. The cost of the viaduct is estimated at \$70,000, and it is thought that the remaining \$10,000 necessary will be speedily available.

Not Yet Chartered.

Mr. J. W. Dawson of St. Paul, Wise county, Virginia, who represents the interests of Mr. Stilson Hutchins of Washington, D. C., writing to the Manufacturers' Record with reference to a proposed railroad in his section, says that the road is to leave the main line of the Clinch Valley division of the Norfolk & Western Railway near St. Paul, Va., and to extend northward toward the headwaters of the Big Sandy river, a distance of about eight miles. It is the intention to secure a charter for the railroad at an early day, and to begin construction of it within the next few weeks.

Western Maryland Report.

The annual report of the Western Maryland Railroad for the fiscal year ended September 30, 1901, shows: Gross earnings, \$2,119,473.62; operating expenses and trackage charges, \$1,290,846.85; taxes, \$43,960.49; net earnings, \$784,417.28; surplus after payment of all fixed charges, \$348,839.90; increase in surplus, as compared with fiscal year ended September 30, 1900, \$114,400.56.

To Become Standard Gauge.

Mr. L. T. Nichols, general manager of the Carolina & Northwestern Railway, writes to the Manufacturers' Record that the company will erect a heavy steel bridge over the Catawba river near Hickory, N. C., in place of the present structure there. This is preparatory to making the road standard gauge. Other bridges at several other points are to be similarly replaced.

Railroad Notes.

The Houston & Texas Central Railway will build several large postal cars.

The Nashville Terminal Co. has filed a petition to increase its capital stock to \$1,000,000.

A survey has been completed for an electric railroad from Jamestown to Hampton, Va., thirty-seven miles.

Mayor Ben. E. Cabell of Dallas, Texas, writes to the Manufacturers' Record that the Dallas Electric Co. has applied for a street-railway franchise.

The Norfolk & Western Railway Co. is about to enlarge its freight depot at Farmville, Va., and it is reported that a new passenger station will also be built.

A dispatch from Nashville announces that the Nashville & Knoxville Railroad has been transferred to the Tennessee Central system on payment of \$500,000.

The Columbia, Newberry & Laurens Railroad of South Carolina for the last half of 1901 reports gross earnings \$86,501, net \$29,029, the latter being an increase of \$9007.

Large generators will be required by the improvements of the Mobile Light & Railroad Co., which include the construction of an electric car line between Mobile and Whistler.

Business men of Scotland Neck will make efforts to build a road from Scotland Neck to the Roanoke river, which was authorized by charter from the last legislature of North Carolina.

The Wilmington (N. C.) Seacoast Railroad Co. has decided to improve its rolling stock and motive power. The track and trestles of the company are also to be repaired within the next two months.

J. P. Hughes is reported to have secured the contract for the Lampasas extension of the Austin & Northwestern Railroad from Llano, Texas, to Lampasas, a distance of about fifty miles.

The Missouri, Kansas & Texas Railway reports for the last six months of 1901 an increase in gross earnings of \$960,824, and of \$198,390 in net earnings. Surplus is reported to have increased \$135,501.

The White Creek Railroad, just completed, is being equipped with rolling stock. It extends from the Baltimore & Ohio Railroad in Somerset county, Pennsylvania, to Unamis, Garrett county, Maryland.

L. B. Comer, who has been elected first vice-president and general manager of the St. Louis & San Francisco Railway, is said to be the youngest general manager of a railroad in the United States, being only thirty years old.

J. T. Harahan, second vice-president of the Illinois Central Railroad Co., writes to the Manufacturers' Record contradicting the report that the company will build a line from Decatur to Jackson, Ala., and thence to Tuscaloosa, and Jackson, Miss.

It is announced that the contract has been let by the Whitney Reduction Co. to William J. Oliver & Co. for the construction of six and three-quarters miles of railway from New London to the Narrows in North Carolina. About 1000 men will be employed upon the work, which is expected to be completed by May 15, and which will cost \$75,000.

The Louisville Railway Co. had last year net earnings amounting to \$147,088.26. The gross receipts were \$1,617,659.19; the operating expenses, including taxes, were \$1,024,036.93, and the interest on bonds and the dividend on preferred stock \$445,934. The company has placed an order with the St. Louis Car Co. for seventy-five new cars, to cost about \$300,000.

A meeting is to be held at the office of the Maryland Trust Co. in Baltimore on March 1 to consider a proposition to give a testimonial to Gen. John M. Hood, who has resigned the presidency of the Western Maryland Railroad Co. It is desired in this manner to express appreciation of the ability and fidelity with which he has discharged the duties of his semi-public position as president of the road.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

To Make Textiles Air and Water Proof

Mention was made last week of the incorporation of the Paducah Textile Co. of Paducah, Ky., with capital stock of \$20,000, and the company's secretary writes the Manufacturers' Record giving details as to the proposed plant. The company has no connection with the Alden Knitting Mills, as was erroneously stated, but instead is erecting an entirely new plant. A two-story building 100x33 feet in size will be completed within thirty days, and will be equipped with machinery for water-proofing and airproofing textiles and making same practically unimpaired by a heat of 270 degrees F. after a constant exposure of twelve hours. At first the product will be water bags and fountain syringes; later, pads, gun cases, coats and other product will be introduced. The process to be used is a new one that the company has acquired. The drying department will be in a room 32 feet by 30 feet 6 inches by 7 feet 6 inches in the clear, and prices on the required fans, heaters and engine are invited. The company has organized with Jos. W. Campbell, president; Jos. L. Friedman, vice-president, and W. F. Brayshaw, Jr., secretary-treasurer.

The New Departure at Gaffney, S. C.

Announcement was made at length in our last issue of the complete finishing plant which H. D. Wheat, president of the Gaffney Manufacturing Co., and his associates will build at Gaffney, S. C. Messrs. Lockwood, Greene & Co. of Boston are now preparing plans and specifications for the buildings; contract for the brick required has been awarded, and arrangements are being made to begin construction and push it rapidly to completion, probably within six months. The main building (a 100x350-foot structure, as stated last week) will contain equipment for bleaching yarns and piece goods, for mcreerizing yarns and piece goods, for dyeing yarns, warps and piece goods, for printing piece goods, and for washing, soaping, tentering, calendering and finishing cotton goods in the different ways now in use.

The establishment of this finishing plant follows on the decision of the Gaffney Manufacturing Co. to change the product of its 67,040 spindles and 1400 looms from plain print cloth to fancy dobby weaves, dress goods, waisting, etc.

A \$15,000 Knitting Plant.

R. J. Fisher of Athens, Tenn., writes the Manufacturers' Record giving details of his knitting mill reported last week as to be established. Mr. Fisher has erected a brick building 50x90 feet in size, and has ordered for installation therein thirty knitting machines, thirty ribbers, twelve loopers and auxiliary machines, besides dyeing plant. The product will be about 275 dozen pairs of misses' and children's ribbed hose daily. The cost of the complete plant will be from \$12,000 to \$15,000.

The Cotton Movement.

In his report for February 21 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight dur-

ing 174 days of the season was 8,474,887, an increase over the same period last year of 414,233 bales; the exports were 4,973,562 bales, an increase of 681,606 bales; takings by Northern spinners 1,532,687 bales, an increase of 56,061 bales; by Southern spinners 971,355 bales, an increase of 102,769 bales.

A Complete Cotton Plant.

Messrs. Buck & Pratt of 27 William street, New York, and Huntsville, Ala., are adding to their Huntsville plant a new cottonseed-oil mill of forty tons capacity with two presses and complete fertilizer plant with all modern improvements. This mill is to be run by the same machinery used for running a large gin plant and cotton press, which will furnish nearly enough seed to keep the oil mill going. In connection with this plant the same firm owns a 20,000-spindle yarn mill and a large fireproof cotton warehouse, making this one of the most unique and complete all-round plants in the South.

Another Cotton Mill at Anniston.

Robert Lucas of Anniston, Ala., writes the Manufacturers' Record to state that the mill mentioned last week as contemplated will be built at once. The building is erected and machinery for producing 4000 pounds daily of cotton batting, rope, twine, window cord, etc., has been ordered. About April 1 production will begin, and sometime after that date it is proposed to install equipment for manufacturing duck, drills and sheeting. A company has been organized with Stephen Noble, president; W. A. Hulsey, secretary-treasurer, and Robert Lucas, general manager-superintendent.

Will Manufacture Knit Goods.

Mention was made recently of the incorporation of the John E. Rudisill Manufacturing Co. of Lincolnton, N. C., with capital stock of \$75,000, and purpose of manufacturing cotton and woolen goods. The company has organized with John Rudisill, president; E. A. Rudisill, vice-president, and J. M. Roberts, secretary-treasurer. It has been decided to install equipment of machinery for the production of ladies' and misses' ribbed hosiery and knit underwear.

Textile Notes.

It is stated that a company has been organized to build a 5000-spindle cotton mill at Dunn, N. C.

M. E. Whitehurst, New Berne, N. C., wants addresses of manufacturers of cotton and manila rope.

N. B. Mills of Statesville, N. C., contemplates the erection of a mill to knit fleece-lined underwear.

The report of last week as to the Gaffney (S. C.) Carpet Manufacturing Co. adding 100 looms was an error.

Raleigh (N. C.) Hosiery Co. has obtained authority to issue \$15,000 worth of 7 per cent. cumulative first preferred stock.

Monarch Cotton Mills of Union, S. C., will build thirty operatives' cottages and a warehouse. This company has a 10,000-spindle and 300-loom mill.

J. Lewis Sale, 196 Main street, Dallas, Texas, is asking for information and prices on equipment for bleachery to be used in connection with sheeting mill.

Mrs. L. G. Miller of Shelby, N. C., has purchased the Laura Glenn Mills at Shelby, which was sold recently at court sale to John E. Hurst of Baltimore, president of the former company.

An order has been passed by court action for the sale of the Fayetteville (N. C.) Cotton Mills, H. W. Lilly being temporary receiver, with Messrs. C. W. Broadfoot

and H. L. Cook as commissioners. The plant has 3120 spindles.

Charter of the Radford (Va.) Woolen Manufacturing Co. has been recorded, naming Geo. W. Miles, president; L. L. Fauler, vice-president-general manager, and Fred Painter, secretary-treasurer.

John Calhoun of Dunbar, S. C., contemplates establishing plant for the manufacture of bobbins and shuttles for textile mills, and asks makers of the required machinery to send prices and information.

Opelika (Ala.) Cotton Mills writes that it does contemplate installing additional spindles, as reported last week, but has not made a definite decision as yet. There are now 6500 spindles in position, and 1248 more are proposed.

J. Haughton Ihrie, Pittsboro, N. C., contemplates establishing plant for the manufacture of bobbins for textile mills, and is now asking makers of the required machinery to send information and prices on the equipment needed.

Columbia (Tenn.) Manufacturing Co., mentioned last week, has lately installed new machinery to make its carding department modern; also has improved its power plant, erecting a stone house and installing two 45-inch water-wheels. Plant has 12,000 spindles and 850 looms.

Royal Bag & Yarn Manufacturing Co. of Charleston, S. C., will increase capital from \$225,000 to \$325,000. This company's \$225,000 mill for manufacturing and printing cotton bags is now ready to begin production. Full details were stated last month as to size and capacity of plant.

Woodruff (S. C.) Cotton Mills states that its plant is now entirely completed, and will begin production this week. The main building, 130x110 feet in size, contains the 11,000 spindles, 250 looms and other necessary machinery. The cloth-room is 50x60 feet. The company has a capital stock of \$200,000.

T. C. Thompson of Birmingham, Ala., writes the Manufacturers' Record regarding the recently-mentioned report that he will build a cotton mill in Leeds, Ala. He states that he intends to erect such a plant in the Birmingham district, but no definite plans have been decided, nor has the location been selected.

Messrs. Seale & Donegan, Nacogdoches, Texas, propose the establishment of a mill for knitting from 500 to 1000 dozen pairs of hosiery daily. They are desirous of receiving correspondence giving full details as to the industry, estimated cost of machinery for such a plant, cost of power plant and best power to use, etc.

Alpha Cotton Mills and Jonesville Knitting Mills at Jonesville, S. C., have consolidated. The Alpha plant has 7000 spindles, producing white hosiery yarns, and the knitting plant operates 115 knitting machines on hosiery production. Steam-power is used, and the product is dyed. The combined capital is \$140,000.

At the public sale of the Wayman Cotton Mills of Waymanville, Ga., last week the property was bid in by the Maddox-Rucker Banking Co. of Atlanta. The purchase price was \$13,500, and it is said the company intends operating the plant if the courts confirm the sale. This plant has 3408 spindles and seventy-six looms.

Shamrock Mills of Winston, N. C., states that it is adding new machinery, as was reported last week. The company has 100 knitting machines, and is adding enough knitters to increase to 350 dozen pairs of hosiery every month, and this capacity is to be increased as fast as the demand requires and operatives can be trained for the mill.

The stockholders of the Strickland Cotton Mills of Valdosta, Ga., have received

the report of expert accountants who had been engaged to examine the company's books. The report showed the enterprise to be in such a satisfactory condition that there is some talk of doubling the equipment. Ten thousand spindles and 325 looms are now in place.

The knitting mill at Tallapoosa, Ga., reported last week, will be operated by Messrs. W. C. Kimball & Co., composed of W. C., W. H. and L. C. Kimball. A two-story building 25x80 feet has been secured, and will be equipped with ten machines for the production of thirty to forty dozen pairs of misses' and children's hosiery daily. Ten operatives will be employed at the start. Additional machines will be purchased later on.

QUOTATIONS OF COTTON YARNS.

By Buckingham & Paulson, New York, Philadelphia and Chicago, February 25.

No. 10s-1 and 12s-1 warps.....	14 1/2¢
No. 14s-1 warps.....	14 1/2¢
No. 16s-1 warps.....	14 1/2¢
No. 20s-1 warps.....	15 1/2¢
No. 22s-1 warps.....	15 1/2¢
No. 24s-1 warps.....	15 1/2¢
No. 6s to 10s bunch yarn.....	13 1/2¢
No. 12s-1.....	13 1/2¢
No. 14s-1.....	14 1/2¢
No. 16s-1.....	14 1/2¢
No. 20s-1.....	15 1/2¢
No. 22s-1.....	15 1/2¢
No. 24s-1.....	15 1/2¢
No. 8s-2 ply soft yarn.....	14 1/2¢
No. 10s-2 ply soft yarn.....	14 1/2¢
No. 12s-2 ply soft yarn.....	14 1/2¢
No. 14s-2 ply soft yarn.....	14 1/2¢
No. 16s-2 ply soft yarn.....	15 1/2¢
No. 20s-2 ply soft yarn.....	15 1/2¢
No. 22s-2 ply soft yarn.....	15 1/2¢
No. 24s-2 ply soft yarn.....	15 1/2¢
No. 8s-2 ply hard.....	14 1/2¢
No. 10s-2 ply hard.....	14 1/2¢
No. 12s-2 ply hard.....	14 1/2¢
No. 14s-2 ply hard.....	14 1/2¢
No. 16s-2 ply hard.....	15 1/2¢
No. 20s-2 ply hard.....	15 1/2¢
No. 22s-2 ply hard.....	15 1/2¢
No. 24s-2 ply hard.....	15 1/2¢
No. 8s-3 ply chain warps.....	15 1/2¢
No. 10s-3 ply chain warps.....	15 1/2¢
No. 12s-3 ply chain warps.....	15 1/2¢
No. 14s-3 ply chain warps.....	15 1/2¢
No. 16s-3 ply chain warps.....	15 1/2¢
No. 20s-3 ply chain warps.....	15 1/2¢
No. 22s-3 ply chain warps.....	15 1/2¢
No. 24s-3 ply chain warps.....	15 1/2¢
No. 8s-3 ply hard twist.....	15 1/2¢
No. 10s-3 ply hard twist.....	15 1/2¢
No. 12s-3 ply hard twist.....	15 1/2¢
No. 14s-3 ply hard twist.....	15 1/2¢
No. 16s-3 ply hard twist.....	15 1/2¢
No. 20s-3 ply hard twist.....	15 1/2¢
No. 22s-3 ply hard twist.....	15 1/2¢
No. 24s-3 ply hard twist.....	15 1/2¢

Cottonseed-Oil Notes.

It is stated that a cottonseed-oil mill is to be erected at Dunn, N. C., to be ready to commence operations for the coming season. The company will be capitalized at not less than \$25,000.

The Houston Cotton Oil Co. of Houston, Texas, has ordered four new presses, together with other machinery, and the company proposes to extend its facilities considerably before the season opens next fall.

During the week ending February 22 the exports of cottonseed products from New Orleans were as follows: Cottonseed meal and cake 9032 tons, cottonseed oil 4325 barrels, and 9500 sacks of delinted cottonseed.

The Corsicana cottonseed-oil mill of Corsicana, Texas, one of the largest in the State, was destroyed by fire on the 19th inst., together with six freight cars on the Cotton Belt Railway tracks. The loss is estimated at \$125,000, fully covered by insurance.

The British steamship Bona cleared from Charleston, S. C., last week for Liverpool with 5032 sacks of cottonseed and 30,880 sacks of cottonseed meal, and the steamship Baron Ardrossan for the same port with 22,360 sacks of cottonseed meal among their cargoes.

The following quotations for cottonseed products were made by exporters at Galveston, Texas, on the 24th inst.: Cottonseed oil, prime crude loose f. o. b. mills, 34 cents, and prime refined, 38 cents; prime cottonseed cake f. o. b. Galveston, \$24.75 per ton, and cottonseed meal, \$25.25, February; linters f. o. b. Galveston, choice, 3% cents; A, 3 cents; B, 2% cents.

A cottonseed-oil mill and fertilizer factory is to be established at Brookhaven, Miss., a charter having been granted the company last week. The incorporators of the company are Cohn Bros., Max

Priebtsch, R. T. Shenck, H. Zarrin, G. Brusky, I. Abrams and others. The capital stock of the company is \$30,000, and it is expected to have an 80-ton plant ready to commence operations next fall.

W. M. Robinson, chief engineer of the Georgia Railroad, and W. D. Nash, general engineer of the Southern Cotton Oil Co., were in Greensboro, N. C., last week, the former locating the side-track and the latter laying off the grounds for the various buildings of the Southern Cotton Oil Co., which will in a few days begin the construction of a \$50,000 plant at that city. The establishment of the mill at Greensboro is due to the efforts of the Board of Trade of that city, which donated the grounds and gave other encouragement to the enterprise.

The following are the official quotations on cottonseed and cottonseed products as posted at the Cotton Exchange in New Orleans on the 24th inst.: Prime refined oil in barrels, 40 1/2 cents per gallon; off refined oil in barrels, 39 1/2 cents per gallon; prime crude oil, loose, 34 1/2 cents per gallon; off do., nominal per gallon; prime cottonseed cake, \$26.12 1/2 per ton of 2240 pounds; off do., nominal; prime cottonseed meal, \$26.25 per ton of 2240 pounds; off do., nominal; soap stock, 1.25 cents per pound; linters, per pound, choice, nominal; A, 3 1/4 cents; B, 3 cents; C, 2 1/4 cents; cottonseed in sacks delivered in New Orleans, \$16 per ton of 2000 pounds; in bulk delivered in New Orleans, \$15 per ton of 2000 pounds.

Developments at Clarksburg, W. Va.

Announcement was made last week of the incorporation of the Clarksburg Industrial Co. of Clarksburg, W. Va., with capital stock of \$100,000, by Messrs. Anthony Bowen, B. L. Shuttleworth, B. B. Stout and other leading business men of the city named. Mr. Bowen writes the Manufacturers' Record that the company will use every effort for furthering the industrial development of Clarksburg, and its first step will be the improvement of a tract of 132 acres of land as a site for manufacturing enterprises. This land has been purchased, and thirty acres of it will be at once improved as sites to be donated to worthy industrial plants seeking a location in the section. Railway connections will be at once made with the Baltimore & Ohio and Pennsylvania railroads.

The Georgia-Carolina Navigation Co. has been organized at Savannah, with J. A. Huger, president; George W. Beckett, vice-president; H. S. Lette, secretary, and W. W. Owens, treasurer, with a capital of \$10,000, to operate a steamboat line between Savannah and Bluffton.

It is calculated that the construction of twenty-one miles of levee from Hickman, Ky., into Lake County, Tennessee, for which an appropriation of \$200,000 is asked of Congress, will result in the reclamation of between 4,000,000 and 5,000,000 acres of rich land.

The Linwood Drug Co. of Birmingham, Ala., has been incorporated, with a capital stock of \$10,000. The incorporators are W. H. Johnson, E. W. Avery and O. D. Lilly of Ensley.

A new steamer, the Liberty, is to be leased by the Chattanooga & Tennessee River Packet Co. to run on the Tennessee river between Chattanooga, Tenn., and Cairo, Ill.

During the past twelve months the capital stock of companies which had been incorporated to do business at Memphis, Tenn., represents \$3,136,200.

The Dimmick Pipe Co. of Birmingham, Ala., has declared a dividend of 6 per cent.

PHOSPHATES.

Phosphate Markets.

Office Manufacturers' Record, Baltimore, Md., February 26.

In the local phosphate market there has been a moderate volume of business during the week, and the offerings are free, both in South Carolina and Tennessee rock. There has been some business in Florida rock, and brokers report several transactions at steady figures. The following phosphate charters were reported last week: British steamer Earleswood, 1480 tons, from the Gulf to the Continent on private terms, prompt; schooner Independent, 1071 tons, Tampa to Baltimore on private terms; British steamer Lorle, 1634 tons, Tampa to Helsingborg on private terms, and British steamer Romsdalen, 1632 tons, from Fernandina to Stettin at 14/3. The Austrian steamer Ariste, 2208 tons, was taken to load nitrate on west coast South America for New York at 20/, July-August. The market for South Carolina phosphate rock continues steady in tone, and the work of miners in Ashley river and at other points is being vigorously pursued. Stocks are not accumulating to any great extent, as the foreign demand absorbs to some extent the surplus stock. In Florida the pebble market is active, and prominent companies have recently been selling freely for European ports. The movement in hard rock is fairly active, with large shipments from the Florida ports. Both pebble and hard rock are now held at outside figures, miners refusing to make concessions in price. The advices from Tennessee report the weather as very severe, and mining operations seriously retarded thereby. The market, however, is in good shape, and with clear weather a large amount of the product will be ready for shipment in March.

Fertilizer Ingredients.

The ammoniate market during the past week has ruled stronger, with a good volume of business reported. Stocks are approximately light, and with a sharp demand in certain lines values close firm and hardening. Blood and tankage are especially strong. There is a good general inquiry from Eastern and Southern points.

The following table represents the prices current at this date:

Sulphate of ammonia (gas).....	\$2 50 @ 2 55
Nitrate of soda, spot Balto.....	2 10 @ 2 20
Blood.....	2 32 1/2 @ 2 35
Azotine (beef).....	2 30 @ —
Azotine (pork).....	2 30 @ —
Tankage (concentrated).....	2 20 @ 2 25
Tankage (2 and 30).....	2 32 1/2 @ 10 1/2 35 & 10
Tankage (7 and 30).....	21 00 @ 22 00
Fish (dry).....	27 50 @ 30 00

Phosphate and Fertilizer Notes.

The steamship Forest Castle cleared from Savannah, Ga., last week for Liverpool with 1500 tons of high-grade Florida phosphate rock, valued at \$15,000, and other cargo.

The fertilizer season in the Wilmington section of North Carolina is now at its height, and guanos are being shipped in immense quantities. The Navassa Guano Co. of Wilmington is now running day and night, employing about 250 men. Its capacity is 400 tons of fertilizer daily. The same is also true as to activity in shipments of the Powers & Gibbs factory.

Mr. A. F. Judson, a well-known mining engineer from the Pacific coast, who has for some months been examining the mineral resources of the State of Georgia, has this to say of the immense beds of kaolin clay near Macon: "I regard your pure-clay industry as the one great factor in the development of your resources, and as you have the material so near your city, you can have a large manufactory located here that would employ hundreds of men in factory and mines. In my extensive travels among mines and among

other productions of the earth I never heard of the wonderful beds of kaolin clay in Georgia until I came on the ground, and while I have no personal interest in a foot of clay ground in your State, yet my knowledge, after examination, leads me to believe that it is one of the coming great industries of your State, and when known and thoroughly investigated, it will grow into one of the great interests of your Commonwealth."

Literary Notes.

Millionaires and Kings of Enterprise. By James Burnley. With thirty-six portraits and illustrations. Publishers, Harmsworth Bros., Ltd., of London, and J. B. Lippincott Company of Philadelphia.

If anything were needed to prove the sudden awakening in England of deep interest in everything American, it would be found in this publication. Its author takes the ground that in the United States there has been more material progress during the last quarter of a century than in any other part of the world, and that in this country are to be found the men of enterprise, genius and determination who have won the chief positions in the realms of industry, commerce and finance—men who have been among the chief factors in the building up of a prosperity which, after a fierce and overwhelming struggle, has given to America unquestioned supremacy in certain important industries. The power of many a one of these has been felt in England, and it has become quite customary for England to look to them when any great project is under way. The rise of some of them has been so rapid that the story of their lives are hardly known, even in the United States. So the work of these publishers in setting forth interesting details of the early struggles of industrial generals will undoubtedly be given recognition not only in England, but also in America.

The March number of The Ladies' Home Journal opens with the story of "The Sexton Who Ruled New York Society," by William Perrine, and then comes another "Lady or the Tiger" story, by the same Stockton who gave us that remarkable tale of mystery. This one is called "My Balloon Hunt." Nellie Blanchan begins a series of unusual articles about birds and their "personalities," and "The Dominic" tells of his journeyings in Europe. Then there is the second instalment of Miss Porter's "Those Days in Old Virginia," and a page of pictures of "Pretty Country Homes from \$400 to \$3200." "His Mother" is a touching story by Kate Whiting Patch, and the fourth part of "The Russells in Chicago" shows us some more of the odd customs and characteristics of the "Windy City."

A meeting of the Georgia Saw-Mill Association was held on the 19th inst. at Tifton, Ga. The lumber situation was reported as entirely satisfactory, mills being well supplied with orders and prices well maintained at the late advance. The car situation was discussed, and it was shown that little improvement was made during the month, which has caused a reduction of at least one-third the output. The demand for car material was reported especially heavy, while all grades of dressed stuff are moving freely. The next meeting of the association will be held in Jacksonville, Fla., on March 18.

The schooner Cox & Green cleared from Jacksonville, Fla., last week for New York with 400,000 feet of lumber, and the schooner Warner Moore with 220,000 feet. The steamer Apache cleared for New York with 269,000 feet of lumber among her cargo.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

LUMBER MARKET REVIEWS.

Baltimore.

Office Manufacturers' Record,
Baltimore, Md., February 26.

The volume of business in many lines of the local lumber market has been limited during the past week, the inclemency of the weather retarding operations. The situation, however, is considered encouraging, and the present and prospective demand both indicate activity throughout the general list of grades and dimensions. The North Carolina pine market is strong, and under more favorable weather conditions some heavy shipments are likely to go forward. In the local market receipts have been very light recently, owing to severe weather on the bay. Stocks are now not near ample for the demand, and the list of values in North Carolina pine continues firm and hardening. White pine is also showing considerable strength, the demand being brisk for certain grades and holders firm in their views. Poplar is showing good form, and for all grades and dimensions prices rule very steady. Stocks of poplar lumber at all primary points are reported light. In hardwoods the market continues to show improvement, and there is a fair demand from furniture manufacturers, wagon shops, car companies and other woodworking concerns. The foreign situation shows a slightly improved tone at ports of the United Kingdom, but on the Continent affairs are dull and unsettled. Local exporters report only a moderate volume of trade.

Charleston.

[From our own Correspondent.]
Charleston, S. C., February 24.

There is a steady movement in all wood products of this section, and the general market is fairly active, with prices unchanged. The demand from the usual sources in the North and East is regular, and shipments show a better volume as the season passes. Saw-mills here and at adjacent points are all running on full time, and have as much business as they can take care of. Among the shipments last week were the following: Steamship Bona for Liverpool with 1933 pieces of walnut lumber, fifty bags of wood, seven and one-half cords of ash logs and one car of dogwood logs. The schooner J. H. Parker cleared for New York with 368,000 feet of lumber, and steamship S. V. Luckenbach for Philadelphia with 2,250,000 feet of lumber. At Georgetown the extensive lumber plant of the Atlantic Coast Lumber Co. is working at its full capacity, and all other mills are making good records. Shipments from Georgetown have been very heavy during January, and the demand for cypress and pine from Northern and Eastern sources is heavy. The total shipments of lumber from Charleston, S. C., for the season of 1901-1902 amount to 29,370,105 feet, against 28,877,773 feet for the corresponding period last year.

Savannah.

[From our own Correspondent.]
Savannah, Ga., February 24.

There has been a fairly active movement throughout the lumber market in this section during the past week, and the demand for lumber continues very steady. At the meeting of the Georgia Saw-Mill Association, held last week at Tifton, the lumber situation was reported entirely satisfactory, mills being full of orders and prices well maintained at the late advance. The demand for car material was

reported especially good, while all grades of dressed stuff were moving freely. The cross-tie industry throughout South Georgia was never more active than at present, there being an urgent demand from railroads. The schooner Joseph B. Thomas is now loading for Philadelphia with 26,000 cross-ties, measuring 1,200,000 feet of lumber. During the past week about 2,000,000 feet of lumber has been shipped to Northern ports. At Brunswick there is a marked increase in shipments of lumber and cross-ties. Receipts of lumber from the interior continue very liberal, and the foreign demand is improving, while the domestic inquiry is liberal. A number of vessels are now in port loading lumber for foreign ports. Hardwoods are now in good demand, with prices firm. Cross-ties, switch ties and bridge ties of pine and cypress are moving freely, while there is now a good foreign demand for oak ties. Shingles continue to attract attention, with a good demand and prices firm. The market for sail tonnage continues quiet for both distant and nearby trades. Vessels are not being urged at reduced rates. The inside limit from Brunswick to New York for lumber is \$5. A number of charters for loading lumber and cross-ties, Savannah and Brunswick to New York, were closed last week on private terms.

Mobile.

[From our own Correspondent.]
Mobile, Ala., February 24.

The timber market has shown very few changes during the past week, and prices are firm at 15 cents for sawn timber. The shipments of sawn timber continue liberal, 261,648 cubic feet leaving port last week for the United Kingdom and Continent. Stocks of timber at all Gulf ports are now about 80,000 pieces, and very little timber is now being made by city mills. Hewn timber is scarce and in demand at 15 to 15½ cents per cubic foot, hewn oak 15 to 18 cents per cubic foot, and hewn poplar at 13 to 13½ cents per cubic foot. Receipts of logs have been more liberal during the past week, owing to a rise in the upper streams; cypress logs, 8½ to 15 cents per cubic foot; poplar logs, \$6 to \$8 per 1000 feet; oak, \$8.50 to \$12, and cottonwood, \$4 to \$5. The movement in lumber at all Gulf ports is now very brisk, and at Scranton, Moss Point and Pascagoula manufacturers are all fully engaged. The demand from Cuban ports for lumber is good, one-half the shipments for the week going to Havana and Matanzas. There is also an urgent demand for cross-ties from Cuba and Mexico, and during the week about 80,000 ties left this port. There is very little doing in the export lumber trade, the foreign demand being limited. Manufacturers and dealers, however, have all they can do to deal with the domestic trade, and mills are nearly all sawing on orders for prompt or near delivery. The freight market is quiet, with rates unchanged. The following charters were reported last week: Dutch steamer Dordrecht, 1364 tons, from Pensacola to St. Nazaire and Holland with timber at \$7/6; March; British steamer Chatton, 2321 tons, from the Gulf to west coast of England with timber at 78/-; late March; Italian ship Jura, 1157 tons, Mobile to Buenos Ayres with lumber at \$11.25; Italian bark Dilbur, 1237 tons, Ship Island to Montevideo with lumber at \$11; schooner Pendleton Bros., 762 tons, Pensacola to Jacaro with lumber and ties at or about \$5.50, and schooner Hattie Dunn, 365 tons, Pascagoula or Mobile to New York with lumber at \$6, option Sound, \$6.25.

Beaumont.

[From our own Correspondent.]
Beaumont, Texas, February 25.

This month is drawing to a close for the

lumber people, and the shipments are going to exceed those of any February yet known since 1893. The market is continually on the up-grade, so far as railroad timbers and ties are concerned, and the \$10 sap-tie regulation continues. The demand is coming in from Central Texas points with a regularity that is pleasing to the local lumbermen. The demand for yard and dressed stock is much better this week than any time during the month, and as a result of the clear weather the shipments from this city have been heavier also than for any time this year. The Bartholomew Lumber Co. is getting along nicely with the work of constructing the big hardwood band mill here, and it should have the plant in operation in three or four months. The Sabine Tram Co. has recently enlarged its planing mill's capacity from 70,000 to 135,000 feet per day. The United Export & Lumber Co. now handles the cut of the large Cooper, La., plant. It was purchased recently from Lockwood & Ross by Mr. L. I. Parminter and his brother, both of this city.

Lumber Notes.

The large lumber-yard of W. S. Gunn of Richmond, Va., was destroyed by fire last week, entailing a loss of several thousand dollars.

The Pritchard-Neimeyer Lumber Co. of Little Rock, Ark., was chartered last week. The company proposes doing a general lumber business.

The Whiteville Lumber Co. of Whiteville, N. C., has amended its charter by increasing its capital stock to \$35,000 and fixing the limit of capital at \$100,000.

The Beattie Lumber Co. of Dallas, Texas, has been chartered, with a capital stock of \$10,000. The incorporators are F. W. McGuire, John M. Beattie and C. W. Beattie.

The Blades Lumber Co. of Elizabeth City, N. C., has completed its second large lumber shed. This plant has now an immense storage capacity, and more operatives are required.

The erection of a veneer mill is contemplated at Knoxville, Tenn., and the services of an experienced manufacturer are sought. For information address J. M. L., P. O. Box 825, Knoxville.

The Dasher Lumber Co.'s planing mill at Marchman, in Brooks county, Georgia, was destroyed by fire on the 20th inst., together with eight cars of lumber ready for shipment. The loss is estimated at \$4000 to \$5000, with no insurance.

A lumber company was organized at Anniston, Ala., last week, to be known as Lynch-Adams Lumber Co. The promoters are Messrs. H. C. Lynch and J. G. Adams of Anniston. The company's mills will be located in or near the above city.

The shipments of lumber from the port of Mobile last week aggregated 1,077,334 feet, and for the season 42,889,140 feet, against 49,672,905 feet last season. The total shipments of sawn timber for the week amounted to 261,648 cubic feet, and of hewn timber 8846 cubic feet.

It was reported at Waycross, Ga., on the 21st inst., that the large saw-mills of the Gray Lumber Co. at Pine Bloom and Leilton, Ga., had been sold to parties in Brunswick. The Gray Lumber Co. is one of the largest lumber concerns in South Georgia, and is doing an immense business.

The Alger-Sullivan mills at Century, Fla., are now running on full time, cutting some of the finest yellow-pine lumber and timber. Shipments of square timber to Pensacola are made every day, and will increase materially the export timber business at that port. It is stated that after March 1 the mills will run night and day.

The Central Lumber Co. of Ocala, Fla., has been chartered, with a capital stock of \$20,000. The company will manufacture lumber, furniture, novelties and other wood products, and buy and sell timber lands. The incorporators are Chas. E. Cullen, Harry B. Clarkson and James M. Barcoe.

The manufacturers of yellow-pine lumber at Scranton and Moss Point, Miss., have been extremely busy since the beginning of the new year. The saw-mills are well supplied with logs from the upper streams. Cross-ties are also being shipped in large quantities to New York and Boston.

The Brook Park Lumber Co. of Enterprise, Miss., owner of one of the largest saw-mills in the eastern section of the State, commenced operations on the 19th inst. The officers of the company are Edward L. Swahn, president; J. W. Panley, vice-president; L. J. Swahn, secretary and treasurer, and Robert J. Barry, manager. The company has a 20-year cut, with an average output of three cars per day.

The Avoyelles Lumber Co., composed of Pennsylvania capitalists, which has recently been organized, owns 100,000 acres of timber land along both sides of Red river, and it is reported will establish one of its saw-mills at Marksville, in Avoyelles parish, Louisiana. Mr. J. B. Staley of South Bend, Ind., is president of the company; A. H. Metzger of Williamsport, Pa., secretary, and James Mausel, treasurer. The home office of the company will be located at Williamsport, Pa.

Mr. John P. Brown of Connersville, Ind., secretary of the International Society of Arboriculture, has been employed by the Illinois Central Railroad to inspect the lands owned by the system in Mississippi for the purpose of selecting an area suited to the experimental planting of many thousands of catalpa trees. The purpose of this experiment is to utilize some of the unimproved lands of the system for the purpose of raising the catalpa tree for cross-ties, lumber and posts.

The Union Lumber Co. of Charleston, W. Va., has been chartered, with a capital stock of \$30,000, all paid in, by Pennsylvania capitalists. The officers of the company are G. W. Barrieklow, president; H. W. Barrieklow, secretary and treasurer; E. C. Higbee and Leslie A. Harvard, counsel. The company owns and will develop a tract of 3000 acres of virgin poplar and oak timber in Webster county, West Virginia, and will have mills located at Cowen and Wainville, in that county.

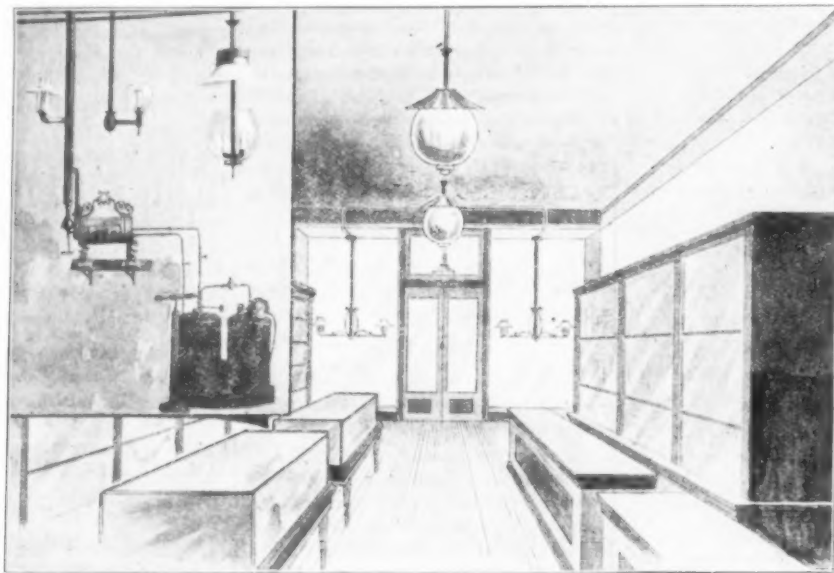
It is stated that within the last two months the lumber companies of Houston, Texas, have purchased no less than 100,000 acres of timber land, and activity along the same line still continues. Little less than \$1,000,000 has been thus far expended in the acquisition of new territory in anticipation of a great demand, both for the product and for property. Logging roads are being constructed, and many new saw-mill plants are being established at points never before entered for development.

It is stated that the American Wood Specialty Co. of New York will establish a plant at Wilmington, N. C., for the manufacture of kindling wood for export to European ports. The company has purchased a shuttle-block factory on the water-front, and on this and an adjoining lot just purchased a plant will be constructed to cost not less than \$50,000. Waste material from the saw-mills will be used, and the company is already buying quantities of wood from country mills to be shipped to Wilmington in contemplation of an early commencement of operations.

MECHANICAL.

1000-Candle-Power Lighting System.

One of the most satisfying lighting systems offered by manufacturers for installation in stores, churches and other public buildings is seen exemplified by the accompanying illustration. It has been specially designed, and is of such simplicity in operation that any child is



A 1000-CANDLE-POWER LIGHTING SYSTEM.

able to comprehend its principles and give the equipment the attention necessary for operation.

This system is the New White Light Gas Lamp Co.'s offering to buyers of this class of equipment. It has recently been invented, and uses gasoline. The conducting pipes contain nothing but gas, and the lamps are lighted as in other styles,

inquiry may be addressed by those desirous of knowing further details.

Coaling at Sea by the British Admiralty.

News comes from England by cable of the complete success of the trials recently undertaken by the British Admiralty in coaling warships at sea with the marine cableway.

The results obtained point to the prac-

way transfer twenty tons of coal an hour with a distance of 300 feet between ships speeding at the rate of six knots. This was successfully accomplished in a heavy seaway.

In the British test the amount to be transferred was increased to forty tons per hour, and the distance between ships to 400 feet (making for greater safety), while the speed of the vessels was almost doubled.

the cables tautened up again and traveler returned.

A large square mast was fitted in the fore part of the collier "Muriel," and from the top of this the cableway extended to the quarter-deck of the "Trafalgar."

An elevator runs on rails secured to this mast, and hoists a ton of coal in bags sixty-five feet put to the masthead. A traveling carriage takes the coal bags from the elevator and transfers them at great speed to the warship. A trip every minute is easily accomplished. The traveler is propelled back and forth by a wire rope one-half inch in diameter operated by two direct-acting engines having two 10x10-inch cylinders and slipping drums.

Instead of using a sea anchor to keep an equal strain on the main cable between the vessels, the same result was ingeniously accomplished by the use of a main cable tension engine, which automatically keeps the cable taut while permitting its length to vary.

This engine has two 13x13-inch steam cylinders, and is geared to a slipping drum. The engine turns in the same direction all the time, and the slipping drum is given a definite power of about five tons by the slip of its friction heads. Hence the drum maintains a constant pull on the main cable, revolving one way and then the other, as the movement of the ships require greater or less length of cable.

The Lidgerwood Manufacturing Co., of New York constructs these coaling equipments.

A Metal Hose.

The successful and economical conveyance of corrosive, destructive or dangerous liquids and gases by means of flexible steel and copper pipes is but little known in America.

This hose constitutes a reliable and practically indestructible substitute for rubber hose, having the durability of metal and the flexibility of rubber. Metal hose, in consequence of its construction and the material employed, is impervious to the influence of all destructive mediums, and is therefore adapted to technical purposes of all kinds, such as conveying steam, compressed air, water, oils,

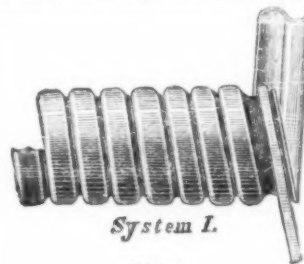


FIG. 1.

acids, alkalies, gases, benzine, gasoline, naphtha, etc.

This metal hose is not flexible metallic tubing, but is quite different, being known as double-metal hose.

This important invention is constructed from a metallic tape which is rolled up in the form of a spiral, so that the edges overlap and fit into each other tightly without detracting from its power of motion. As the tape is rolled up it forms a groove for the reception of a packing which is completely enclosed in the metal as it rolls, where it remains fully protected from internal or external wear and tear. The packing causes the tubing to be perfectly tight, while the jointing induces a flexibility superior to rubber hose of equal dimensions.

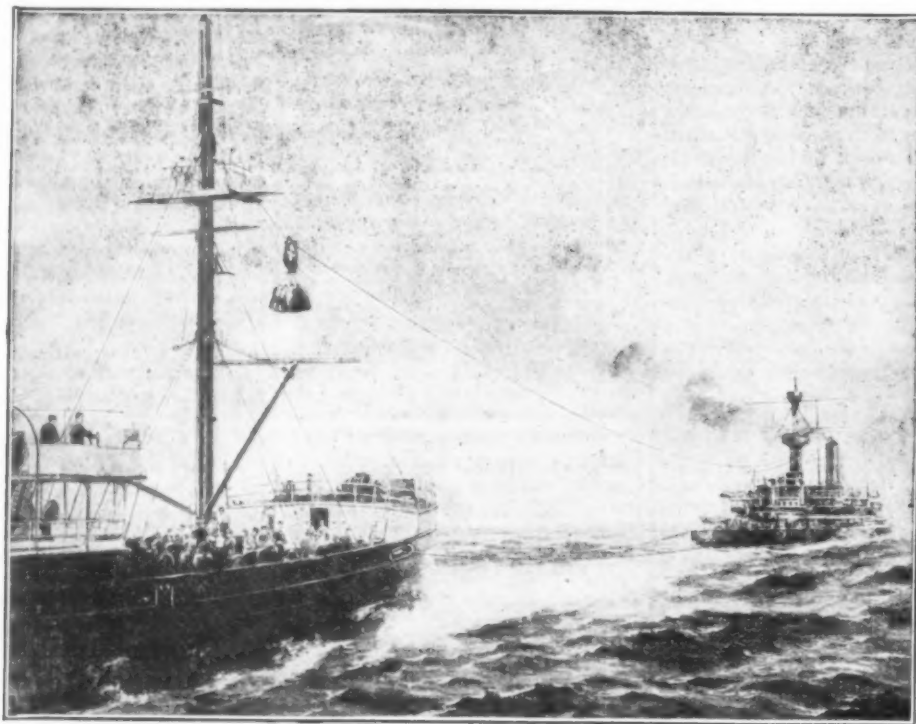
As this hose will not kink, crush nor blister, it always delivers to its full capacity, and will assure a relatively larger opening than rubber hose of equal diameter; furthermore, as all couplings and

tical solution of this most troublesome of problems confronting naval experts the world over, and marks a distinct advance in marine engineering practice.

The Lidgerwood-Miller marine cableway will soon be tested on one of the United States battleships preparatory to general adoption by the government, and Russia has already applied it to the latest

The official test in the English channel with the battleship "Trafalgar" and collier "Muriel" in tow lasted three hours, and developed a maximum of forty tons of coal transferred per hour.

The engraving herewith shows the two vessels while making the test, and gives a good idea of the working of the cableway.



BRITISH BATTLESHIP "TRAFALGAR" COALING AT SEA.

with a match. The company claims that at twelve cents per gallon for gasoline a user of the system can furnish himself illuminating gas for ten cents per 1000 cubic feet, and the equipment is guaranteed for ten years, while with proper care there is no limit to the duration of its usefulness.

The company has offices at 312 West Madison street, Chicago, where letters of

of its great battleships now building at Philadelphia.

Whatever difficulties may have been encountered heretofore in the perfect working of the device have been overcome in the latest form of the cableway as perfected by Spencer Miller, the inventor; also its capacity has been increased to enable it to give the maximum service desired. It was required that the cable-

The pair of sheaves which was formerly required upon the after-deck of the towing vessel and a canvass chute down which the bags of coal were dropped has been done away with.

When the load of bags reaches a point in transit immediately over the after-deck of the receiving vessel all the cables are pulled down to the deck, the loaded bags deposited, the empty ones hooked on, and

connections are made from the outside, leaving the full internal diameter constantly available, a smaller size of metal hose can be used.

In the accompanying illustrations the metal hose is seen distinguished by three systems.

System 1.—The packing is of rubber, and lays between the overlapping edges of the tape. (See Figs. 1 and 2.) This hose is made only for light work, such as gas and for discharging pipes where there is not much pressure.

System 2 is packed with asbestos. The packing does not simply lay between the overlapping edges, as in the case of

Frick Building. This action of the company will facilitate the sales and delivery of its complete line of tools in that section which Pittsburgh commands.

Sale of Woolen Mills.—Manufacturers, present or prospective, looking for an opportunity to purchase a woolen and worsted mill are invited to address Estate of Samuel K. Wilson, Factory and Cooper streets, Trenton, N. J. The property offered will be sold at public outcry on March 19. It includes complete plant of machinery and power. Descriptive catalogues are ready for distribution.

Cleaning Water-Tube Boilers.—Oxnard (Cal.) Beet Sugar Refinery on February 7 ordered four Atlas tube-cleaners for cleaning water-tube boilers. It had been using one to

Seranton Engineers' Club.—At the annual meeting of the Engineers' Club, Seranton, Pa., last month the following officers were elected: President, H. H. Stock; vice-president, B. F. La Rue (professor of civil engineering in the International Correspondence Schools); secretary, A. E. Lister; treasurer, F. J. Platt; corresponding secretary, A. B. Dunning; librarian, H. M. Lane (professor of mechanical engineering in the International Correspondence Schools); directors, W. M. Marple, C. C. Rose and H. W. Rowley. President Stock is the able editor of "Mines and Minerals," the well-known mining publication issued by the International Textbook Co., proprietor of the International Correspondence Schools.

Incorporating in Delaware.—Maryland Dredging & Contracting Co. of 801 Fidelity Building, Baltimore, Md., has, through Mr. Frank A. Furst, president, and Frederick W. Feldner, secretary, filed an amendment to its incorporation, increasing capital from \$100,000 to \$200,000. This company was incorporated and is represented in Delaware by the Delaware Charter Guarantee & Trust Co., 925 Market street, Wilmington, Del. Business men throughout the country are using the Delaware laws largely for incorporating, and the Delaware Charter Guarantee & Trust Co., through the experience, promptness and ability of its officers, has shown itself a most satisfactory medium through which to secure Delaware charters.

Durable Pipe Coating.—A new composition called "Zero Paint" is being used by a number of steam and refrigerator plants, and experience has shown it to be an absolutely heat and cold proof protecting coat for boiler fronts, refrigerator and steam piping. "Zero Paint," while more expensive per gallon than others, is claimed to outwear similar compositions many times. One coat has lasted as long as three years, for instance, on refrigerator coils in a large cold-storage warehouse in New York. It is found not to peel or become sticky under heat, nor to crack on extremely cold pipe. This paint is made specially for and sold by the John Simmons Co. of 110 Centre street, New York, a large manufacturing house in the pipe-fitting and valve line. The company has convinced many operators and engineers of power and refrigerator plants as to the effectiveness of "Zero Paint" as a preserver of piping.

F. M. Hicks' Railway Equipment.—The demand for railway equipment of different kinds continues to be urgent, and buyers in this field find it difficult to have their orders filled promptly and to their satisfaction. But that F. M. Hicks, the Chicago manufacturer and dealer, is meeting orders and giving them prompt attention is shown by his recently filled contracts. Among his recent orders was one for a 10-wheel locomotive to be used in the lumber business in Arkansas; another was for two 18x26 locomotives for the Louisiana & Arkansas Railroad; another was for a private car for the manager of a British Columbia railroad, and yet another was to furnish ten flat cars by March 15 to a Wisconsin lumber company. Buyers of railway equipment are invited to address F. M. Hicks, 225 Dearborn street (room 629) for estimates, terms and dates of delivery of any cars or locomotives they are ready to purchase.

Always Satisfactory.—It is a strong statement to make that an article is always satisfactory, but the many who have utilized the compounds placed on the market by Messrs. Geo. Callahan & Co., 218 Front street, New York, will bear witness to the truth of this assertion. Perhaps the cements offered the trade by this firm have acquired a special reputation for their uniform reliability. Every roof repairer who has been fortunate enough to secure their roofing cement knows that it will stick to a wet roof, while it can actually be applied to a leaking roof successfully, even where considerable water may be running over the broken places. As an aid to the roofer in stopping both large and small leaks it is invaluable. It possesses the special merit of being very elastic, while it never becomes hard or dry in packages, consequently a supply can always be kept on hand ready for emergencies. Some of the largest manufacturers in the country carry a stock for repairs to their different buildings. Among them are Russell & Erwin, P. & F. Corbin and Abendroth Bros., while one of the best customers of Callahan & Co. is the War Department, which uses it on military barracks. The steam-joint or pipe cement, for it is known by both titles, comes in the form of a dry powder. When mixed with boiled linseed oil it is claimed to have fully three times the bulk of ordinary red lead, while, instead of shrinking in the setting process, it swells, making a joint which is not only steam-tight, but is not affected

by chemicals of any kind, oil, gas or water. As an illustration of its worth the cement was put on a flange joint eighteen inches in diameter, sustaining from 300 to 400 pounds pressure. Although the cement was applied seven years ago, the flange today is perfectly tight. The cement can also be used in connection with copper gaskets, as it adheres firmly to the metal, although it can be easily separated when desirable. It contracts and expands with the metal without cracking or being otherwise affected by the pressure. Tests have been made of this compound which prove that it will not blow out, although placed under great pressure, while it can be used on irregular flange joints and on smooth surfaces alike. It is put up in packages of various sizes for convenient use. Messrs. Callahan & Co. will be pleased to furnish strong testimonials from the many who have used their roofing and pipe cement, as well as paints and other specialties, to inquirers.

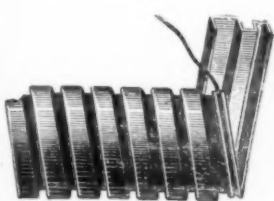
TRADE LITERATURE.

Biggest Log and "Slickest" Saw.—"That's the biggest log I ever saw," says the lumberman as he prepares to use an Atkins saw on an immense trunk of a giant of the forest. And then, after a brief interval, the millman remarks, "The Atkins saw is the slickest saw I ever saw." For full explanation of this incident in the mill regions, write E. C. Atkins & Co. (Inc.), Indianapolis, Ind. No explanation is needed as to the quality and workmanship of Atkins saws, which are known the world over. The interesting advertising novelty and pocket calendar which does the trick of "the biggest log and the slickest saw" will be a relish for the wisest men.

Bits and Tools.—This is a line of machine tools that finds ready demand in manufacturing throughout the country. Buyers of this class of tools desirous of investigating a meritorious line are invited to correspond with the Forest City Bit & Tool Co. of Rockford, Ill. This company has issued a new catalogue covering its product, wherein is included hollow mortising chisels, hollow chisel bits, machine bits and drills, countersink bits, Jennings brace bits, etc. It has made a specialty of machine bits for twelve years. The demand has just recently forced a doubling of the capacity of its plant. Also made by the Forest City concern are bell hangers, spoon bits, fine edged tools and articles of twisted steel generally.

Sheet Metal and Wire Goods.—A most complete line of the product that may be included in the term "sheet metal and wire goods" is manufactured at Newark, N. J., by Messrs. R. C. Jenkinson & Co., 289 Washington street. Such articles as buckles, clamps, corners, sample-case work, bag frames, trunk trimmings, bag trimmings, shells, washers, burs, metal stampings, blanks and hundreds of others are mentioned in the leaflet and advance pages of catalogue which the firm has issued. Jenkinson & Co. have one of the most complete manufacturing plants of its character in the country, and the merits of their product have created extensive demands with manufacturers using the line of supplies mentioned. The firm is prepared to make fancy metal goods, notions, novelties, etc., to order, and solicits inquiries from buyers.

Coal Handling Machinery. Modern economies in the handling of product that is in constant demand have evolved some interesting and most ingenious equipments in the line of mechanical apparatus. The handling of coal, for instance, by machinery has attracted the attention of some of the most prominent of inventors in the machinery world, and some of the most prominent of the manufacturing concerns in that world are offering these inventions to users. The C. W. Hunt Co. of West New Brighton, Staten Island, N. Y. (offices at 45 Broadway, New York city), has given thirty years' experience to the designing, building and operating of coal-handling machinery, and it has satisfied some of the most exacting users in the coal trade. The Hunt Company aims to supply to the purchaser none but machines that are as good in every respect as though the purchaser himself had selected the materials and personally supervised construction in its factory. The Hunt customers are those who buy and wear out the equipments they purchase, hence select quality and efficiency first of all, and thus subordinate quality to cost. Yet the cost of Hunt equipments is always consistent with the work furnished, only a reasonable profit being asked. Catalogue No. 22 describes and illustrates the machinery to which reference has been here made, and no present or prospective buyer of coal-handling machinery should deem his investigations complete until he has examined its pages. Address the New York office.



System 1.
FIG. 2.

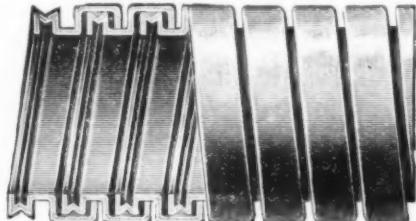


FIG. 3.

System 1, but is held firmly in a groove of the tape. (See Figs. 2 and 3.)

System 3.—The double hose for steam is shown in Fig. 4. This hose is constructed of two tubes, one inserted within the other, and firmly fastened at the ends. The coils of each tube are in opposite directions. While the coils of the single tube may become untwisted from careless handling or when subjected to great strain, this can never be the case where the double hose is used.

This double hose is absolutely safe, and its maker claims will withstand the greatest demands that can be made with respect to tightness and power of resistance, and can be made in special cases to

see if it would do all that was claimed by the manufacturer. The order for four more is certainly evidence of the fact that it was satisfied with the Atlas tube-cleaner, Atlas Pipe Wrench Co., 121 Liberty street, New York, makes it.

Demand for Wesco Battery.—The Western Electrical Supply Co. of St. Louis states that the demand has become so great for its new Wesco dry battery, recently placed on the market, that the company is hardly able to fill orders for it. It is claimed that this battery has the highest voltage, greatest current discharge, most rapid recuperation and longest life of any battery on the market. It is sent out for trial on application.

An Obermayer Move.—The S. Obermayer Co. of Cincinnati, the well-known manufacturer and dealer in foundry supplies, has

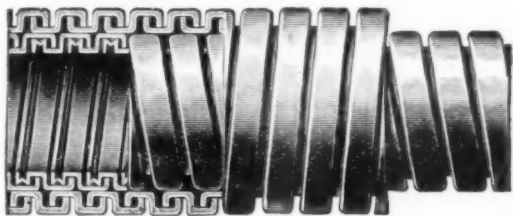


FIG. 4.

withstand a pressure up to 3000 pounds per square inch.

For conveying steam under any pressure its use is unequalled. It is in successful use for blowing flues, rock drills, on railroads, in mines, tunnels, etc.

For the conveyance of greasy liquids, which speedily attack rubber, this hose gives the best possible results, as the flexibility is increased by the lubricating nature of the liquid passing through it and its life is prolonged.

Those readers desirous of investigating further are invited to address the American Metal Hose Co. of 40 Dearborn street, Chicago.

TRADE NOTES.

Cross Oil Filters Again.—Two 120 gallon Cross oil filters manufactured by the Burt Manufacturing Co. of Akron, Ohio, were recently ordered by the Anaconda Mining Co. of Butte, Mont. These filters are made in any capacity up to 500 gallons a day.

Handle Factory Sale.—Woodworkers desirous of securing a plant that is ready for operation or of buying the machinery contained in such a plant are invited to correspond with L. M. Nance, receiver, Roxbury, Va. The plant referred to is to be sold March 4. It is favorably located for developing an extensive business, and is thoroughly complete.

Pratt & Whitney in Pittsburgh.—The Pratt & Whitney Co. of 126 Liberty street, New York, manufacturer of machine tools, has established an office at Pittsburgh, Pa., D. D. Macomber to be in charge, with offices in the

just made a move in connection with its business that will greatly facilitate its ability to supply the large and continually growing trade for its goods. This move is retaining W. W. Root in charge of traffic for the Obermayer plants at Cincinnati, Chicago and Pittsburgh. Mr. Root is well known in railroad circles, and was formerly general Western freight agent of the Big Four Railway at Kansas City.

Ball Engines Again.—The repetition of orders received for Ball engines speaks volumes in favor of those excellent power machines. Especially for electrical connection are these engines being demanded. Among the most recent orders filed by the Ball Engine Co., which has its plant at Erie, Pa., was a contract calling for a 175-horse-power engine arranged for direct connection to a 100-kilowatt General Electric generator. This is a duplicate of plant furnished a year ago. The order came from a prominent Southern coal-mining concern.

Contract for Condensing Apparatus.—Alberger Condenser Co., 95 Liberty street, New York, has been awarded contract to furnish condensing apparatus for the central power station of the Rapid Transit Subway Railroad. This apparatus will consist of eight units of 10,000 horse-power each, or a total of 80,000 horse-power, claimed to be the largest condenser equipment ever undertaken. The type of machine selected for this important service is known as the barometric condenser, recently introduced by the Alberger Company, and represents the most advanced form of engineering. The water pumps and the vacuum pumps used in this apparatus are separate crank and flywheel machines, and are to operate in a vertical position. There were eight other bidders on this contract.

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in a town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and it is often advisable to add the names of one or more incorporators as an add to the postmaster in delivering mail.

ALABAMA.

Anniston—Lumber Plant.—Lynch-Adams Lumber Co. has been organized by H. C. Lynch and J. S. Adams to erect planing, saw and sash mills.

Anniston—Cotton Mill.—Robert Lucas has organized the company reported last week and ordered machinery for producing batting, twine, etc. Stephen Noble is president; W. A. Hulsey, secretary-treasurer, and Robt. Lucas, manager-superintendent; later, machinery for making duck, drills, etc., will be installed.

Ragland—Coal Mines.—Ragland Coal Co. is opening another shaft, and will double capacity of its coal mines.

Bessemer—Coal Mines.—Alabama Steel & Wire Co. of Ensley, Ala., has purchased, it is reported, for \$95,000 the coal lands near Bessemer of Col. T. H. Aldrich. Improvements will be made and mines developed on extensive scale.

Bessemer—Water-works.—Bessemer Water-Works Co. will secure new water supply from Hawkins Springs as soon as city makes new contract.

Birmingham—Coal Mines and Coke Ovens.—Davis Creek Coal & Coke Co. has been organized, with capital stock of \$275,000 and W. E. Leake of Birmingham, president; Henry Parson of New York, vice-president; J. C. Mahen, Jr., of Birmingham, secretary-treasurer. Company will open coal mines in Tuscaloosa county and build 100 coke ovens.

Birmingham—Warehouse, etc.—Chartered: Watson Warehouse & Mercantile Co., by T. G. Watson, W. A. Chenoweth and H. H. Mayberry; capital stock \$40,000.

Birmingham—Pipe Foundry.—Dimmock Pipe Co. is enlarging and improving its foundry at a cost of \$25,000.

Brookside—Water-works.—City contemplates constructing water-works. Address "The Mayor."

Decatur—Saw and Veneer Mill.—Arantz Bros. will erect a \$5000 dimension saw-mill to be operated in connection with their band mill; will also build a large veneer factory.

Huntsville—Planing Mill.—G. A. Plummer has purchased the E. R. Latta planing mill; will improve and operate same.

Huntsville—Fertilizer Plant and Oil Mill.—

Buck & Pratt (New York office at 27 William street) are adding a 40-ton cottonseed-oil mill and fertilizer factory to their cotton-ginning, compressing and 20,000-spindle cotton-mill plant.

Ironaton—Furnace.—Alabama Consolidated Coal & Iron Co., T. G. Bush, president, Birmingham, Ala., has blown in its No. 2 Ironaton furnace, after having been thoroughly renovated. The blowing in of two or three other furnaces in a short time will increase the Alabama output by 500 tons per day.

Leeds—Cotton Mill.—T. C. Thompson of Birmingham writes that the report as to his building a cotton mill at Leeds is premature, but he does intend erecting such a plant in the future.

Mary Lee—Coke Ovens.—Ramsey Reilly Engineering & Construction Co. is building twenty coke ovens at Mary Lee for Alabama Consolidated Coal & Iron Co.; T. G. Bush, Birmingham, Ala., president.

Opelika—Cotton Mill.—Opelika Cotton Mills contemplates adding 1248 spindles; now has 6500 spindles.

Sheffield—Brewery.—Sheffield Brewing & Ice Co. has been incorporated at Cincinnati and will operate the brewery which the members of the company bought some time ago and have since improved; capital stock is \$100,000; Eduard J. Kottes, president; E. M. Schweiner, vice-president; F. S. Starkey, secretary.

Sheffield—Electric-light Plant.—It is reported that F. Brumbach, electric engineer, of Chicago, Ill., is investigating the advisability of erecting an electric-light plant at Sheffield.

Tuscaloosa—Rolling Mill.—Ben Catchings of Birmingham, Ala., has, with others, formed Southern Rolling Mills Co., with capital stock of \$60,000, for erection of his proposed rolling mill. It will be a 13-inch mill, with 500-horse-power boiler and engine, fifty tons capacity, according to Mr. Catchings' recent statement.

Tusculum—Shops.—Southern Railway is erecting new buildings at a cost of \$30,000 for its proposed shops, which are to be removed from Memphis, Tenn.; Frank S. Gannon, general manager, Washington, D. C.

ARKANSAS.

Lake City—Land Company.—Lake City Land Co. has been incorporated, with capital stock of \$200,000, by A. J. Bates, F. W. Taylor and M. J. Springer.

Little Rock—Lumber Company.—Incorporated: Niemeyer-Fritchard Lumber Co., capital \$50,000, by Charles Niemeyer, J. H. Fritchard, A. B. Beeler, T. G. Roberts, S. Emerich and J. Sloan, Jr.

Osceola—Hardware Company.—Osceola Hardware Co. has been incorporated, with capital stock of \$7000, by A. O. Burton, D. H. White, J. H. Burton and others.

Pine Bluff—Box Factory.—R. J. Kaiser of Muscatine, Iowa, has purchased saw-mill at Pine Bluff, and will improve it for operation as a box factory.

Waldron—Lumber Plant.—Scott County Lumber Co., recently reported incorporated with \$20,000 capital, is now building plant, and expects to begin operations March 1; machinery all purchased.

FLORIDA.

Crescent City—Saw-mills.—G. W. Dean has purchased about 1700 acres of timber lands, and will erect saw-mills for developing same. Address care Keltner & Dean.

Jacksonville—Laundry.—Hilditch Laundry Co. has been incorporated, with capital of \$12,000, for conducting steam laundry. John A. Cunningham is president; Thomas Hilditch, vice-president, and Theo. W. Webb, secretary-treasurer.

Jacksonville—Fiber Factory.—It is reported that the West Indian Trading Co. will be organized for the purpose of preparing fibers for making mattresses and for upholstery uses.

Tampa—Packing Plant.—It is reported that Cudahy & Co. have purchased site at Tampa and have had plans drawn for erection of a branch packing establishment.

GEORGIA.

Atlanta—Railroad Viaduct.—Southern Railway Co. and other railways have made a proposition that if the city will construct the proposed Peters-street viaduct they will furnish \$35,000 of the \$70,000 required to build

it. The work of construction is to be commenced, according to the offer, by May 1 and be completed by April 1, 1903. Plans and specifications are to be acceptable to the city engineer and engineer of the railways. T. Steel, engineer of Central of Georgia Railway, recently submitted a plan for the structure. James G. Woodward is chairman of city committee.

Atlanta—Tinplate Company.—Charles A. Conklin and John N. Goddard have incorporated Conklin Tinplate Metal Co., with capital of \$60,000, to deal in metals, etc.

Augusta—Coca-cola Factory.—Jesse M. Rainwater, J. E. Reed and Abner F. Rainwater have incorporated Augusta Coca Cola Bottling Co., with capital of \$2000, for manufacturing and bottling coca cola.

Bainbridge—Navigation Company.—Bainbridge Navigation Co. has been incorporated, with capital stock of \$25,000, by H. G. Draper, C. H. Caldwell, R. G. Hartsfield, L. A. Chittwood and others.

Blue Ridge—Packing-house.—Armour Packing Co. (main office, Chicago) will, it is reported, erect a three-story brick packing-house.

Darien—Saw-mill.—Hilton & Dodge Lumber Co. will build saw-mill next fall.*

Fort Valley—Brick Works.—R. S. Braswell has purchased 600 acres of clay lands, and will erect works with capacity of 1,000,000 bricks per year.

Greensboro—Ice Factory.—Greensboro Creamery Co. will erect an ice factory.

Greensboro—Cotton-oil Mill.—The cottonseed-oil mill previously reported to be erected by Southern Cotton Oil Co. of Atlanta, Ga., will cost \$50,000, and work on same will shortly be commenced.

Harmon—Flour Mill.—Gaines W. Lovorn will erect 50-barrel flour mill, and has not yet contract for machinery.

Macon—Factory.—Henry Horne has completed arrangements for the location of a factory on a five-acre site.

Tallapoosa—Knitting Mill.—W. C. Kimball & Co. will own and operate the knitting mill reported last week. Ten machines will be installed, to be increased later on.

Waynesboro—Electric-light Plant and Water-works.—City will vote March 27 on issuance of \$30,000 of bonds for erection of electric-light plant and construction of water-works; R. C. Neely, mayor.

KENTUCKY.

Barboursville—Oil Wells.—Tollers' Oil Co. has been organized for development of 100 acres of oil land. Mark D. Scott is president; C. H. Craig, vice-president; Hibbard Patterson, secretary, and James M. Woodruff, treasurer.

Barboursville—Oil Wells.—United States Oil & Land Co. has been incorporated for development of 160 acres of oil lands, with \$1000 capital. Address F. D. Sampson for particulars.

Barboursville—Street Improvements.—City will vote March 3 on issuance of \$10,000 bonds for improving its streets; H. C. Cole, mayor.

Barboursville—Nitro-glycerine Factory.—L. H. Broadwater of Findlay, Ohio, is said to be investigating with a view to establishing nitro-glycerine factory at Barboursville.

Blueick Springs—Corn and Flour Mill.—G. L. Carter of Flora, Ky., will erect a 35-barrel flour mill and corn mill; has not awarded contract for necessary machinery.

Corbin—Oil Development.—I. N. Bryant, J. C. Maynor, J. E. Bryant and others have incorporated Corbin Oil & Gas Co., with capital of \$12,000, and Lynn Camp Oil & Development Co., with capital of \$6000.

Edmonton—Flour Mill.—Sam M. Duke will build a 40 to 50-barrel flour mill.

Ewing—Oil and Gas Wells.—Wm. F. Schooler of Morehead, Ky., is vice-president of Bradley-Riley Oil & Gas Co., recently incorporated with capital stock of \$25,000, and can be addressed.

Frankfort—Oil Wells.—Indian Creek Oil Co. has been incorporated, with capital of \$10,000, for development of oil lands. W. S. Pryor is president; S. B. Dishman, vice-president; C. B. Chenault, secretary-treasurer.

Frankfort—Distillery.—Incorporated: The Frankfort Distillery, to do a general liquor and distilling business; capital stock \$100,000. Incorporators are Geo. Baker, R. A. Baker, Mary D. Baker of Frankfort and T. W. Hinds and M. Culhane of Chicago.

Georgetown—Plumbing.—Walter Scott has organized Georgetown Plumbing Co., with capital stock of \$7000, to conduct plumbing business.

Henderson—Oil and Gas Wells.—Ohio Valley Gas & Oil Co. has been incorporated by C. A. Phillips, C. N. Sights and others for development of 1250 acres of oil lands.

Lexington—Swimming Pool.—Lexington & Fayette County Swimming Pool Co. has been organized to conduct swimming pool and gymnasium; building will be erected.

Louisville—Coal Mines.—Taylor Coal Co., I. P. Barnard, general manager, has filed mortgage for \$125,000 for extension and development of its properties.

Paducah—Textile-goods Proofing Mill.—Paducah Textile Co., reported incorporated last week, has organized with J. W. Campbell, president; J. L. Friedman, vice-president, and W. F. Bradshaw, Jr., secretary. Company is not connected with Alden Knitting Mills, as was stated, but is erecting new plant to waterproof and airproof textile goods after a new process. At first water bags and syringes will be made, and later on gun cases, coats, etc. A drying equipment will be installed. Capital is \$20,000.*

Paducah—Trousers Factory.—Famous Pants Factory has been incorporated, with capital stock of \$30,000, by Benjamin, Charles and James Wells and L. S. Levy, and is now equipping plant.

Pineville—Telephone System.—John W. Woodward of Barboursville, Ky., has purchased Pineville Telephone Exchange, and will construct line to Barboursville.

LOUISIANA.

Abbeville—Rice Mill.—Planters' Rice Milling Co. will erect another mill with capacity of 600 barrels a day.

Jeanerette—Rice Mill.—Dr. C. A. McGowan, H. L. Bracey, John E. Bourg and others have incorporated \$50,000 company for erection of rice mill.

Jennings—Water-works and Sewerage.—City has voted issuance of \$40,000 of bonds for the construction of water-works and sewerage. Plans are said to be ready. Address E. T. Sweet, mayor.

Lake Charles—Oil Wells.—Majestic Oil Co. has been incorporated, with capital stock of \$2,000,000, with W. H. Winans, president; C. M. Sheldon of Kansas City, vice-president, and J. M. Mulvane of Topeka, Kan., treasurer.

Marksville—Lumber Mills.—Avoyelles Land & Improvement Co., previously reported (under New Orleans) as incorporated with capital stock of \$50,000, has purchased 100,000 acres of timber lands in and around Marksville, and will build large lumber mills and make other extensive improvements. J. B. Staley of South Bend, Ind., is president, and A. H. Metzger of Williamsport, Pa., secretary; principal office will be in Williamsport.

Monroe—Telephone System.—Home Telephone Co. has purchased system of Monroe Telephone Co., and will operate same.

New Orleans—Sugar-planting, etc.—Company.—Henry J. Sanders, R. S. Caldwell, John W. Shelby and others have incorporated Bayside Sugar Planting & Manufacturing Co., Limited, with capital stock of \$300,000, to cultivate and operate sugar plantations, manufacture sugar, etc.

New Orleans—Land Improvement, Mineral Development, etc.—C. C. Harvey, Harry H. Hall, Larza A. Jones and others have incorporated Railroad Lands Co., Limited, with capital stock of \$120,000, for dealing in real estate, developing mineral lands, etc.

New Orleans—Sugar-making Device.—Century Sugar Apparatus, a sugar-making device invented by O. M. Nilson, is being manufactured at P. H. Kelly's iron works. Company owning the device is composed of Wm. P. Luck, president; H. C. Ramos, vice-president; O. M. Nilson, secretary.

New Orleans—Oil Wells.—Wm. E. Wren is organizing a company to drill for oil near New Orleans.

MARYLAND.

Annapolis—Grading Contract.—Shreve & Co., North and Eager streets, Baltimore, were the lowest bidders for clearing site and grading land recently purchased by Naval Academy at a bid of \$44,700. It is rumored all bids will be rejected and the work done by the Navy Department.

Baltimore—Labeling Machine Factory.—William H. Leister Manufacturing Co., for

making labeling machines, has been incorporated by William H. Leister of Westminster, Md.; Charles A. Kurtz, Frederick S. Kurtz, Frank W. Waterman and William G. Towlers of Baltimore; capital stock is \$50,000.

Baltimore—Buggy-top Factory.—Larrimore Buggy-Top Co. has organized for the manufacture of buggy tops and coach trimmings; Melvin S. Griffith, president; Robert N. Larrimore, vice-president, and Thomas J. Ward, secretary-treasurer. Capital stock is \$15,000, and an established business will be continued at 102 East Pratt street.

Baltimore—Rice-machinery Works.—Incorporated: United Rice Machine Companies of America, for manufacturing rice-polishing and cleaning machinery, authorized capital \$100,000, by E. J. Clark, R. W. Welch, G. R. Holmes, A. P. Strobel and H. C. Reitz.

Baltimore—Sausage Factory.—Incorporated: Jacob C. Shafer Company, for manufacturing sausage, lards, etc., by Frederick Shafer, Chas. A. Hook, Eliza W. Shafer and others; capital stock \$150,000.

Baltimore—Photo-engraving Plant.—Baltimore Engraving Co. has been incorporated, with capital of \$10,000, to conduct photo-engraving plant, by Oliver Hoblitzell, John G. Hoblitzell, Robert M. Hoblitzell and others.

Baltimore—Cannery, etc.—Wm. P. Price, James E. Mister, Jos. P. Price and others have incorporated Price-Mister Can Co. for manufacturing tin cans and conducting cannery; capital \$3000.

Baltimore—Cannery.—Chartered: J. T. Warner Co., for packing fruits, etc., by Jas. T. Warner, John H. Warner, Chas. O. Hobbs and others; capital \$1000.

Bloomington—Coal Mines.—North Branch Company has about completed its arrangements to reopen coal mines that have been in litigation.

Catonsville—Water-works.—Catonsville Artesian Well Water Co. will incorporate, with capital of \$10,000, to drill for water and construct system of supply to Catonsville, Relay, St. Denis and other villages.

Corbett—Silo Factory, etc.—American Farm Co. will erect building 40x100 feet for manufacture of silos, as lately reported; will also erect warehouse and elevator 40x100 feet.

Westminster—Mercantile.—The general merchandise establishment of Miller Bros. has been incorporated as the Miller Bros. Co., with Fred D. Miller (of Baltimore), president; Frank Z. Miller, vice-president; Jacob H. Handley, secretary-treasurer; capital stock \$50,000.

Williamsburg—Flour Mill.—F. P. Corkran will erect flour mill, and has not awarded machinery contracts.

Williamsport—Electric-light Plant.—City will expend \$5000 in enlarging its electric-light plant; F. L. King, town clerk.

Woodstock—Copper Mines.—Liberty Copper Mining & Milling Co. will make the improvements to mining plant recently mentioned. Betterments will include installation of equipment for electric lighting, 150-ton ore dryer, conveyors, machine shop, etc., and capacity will be increased from 100 to 500 tons daily. Bernard J. Krause is president, with offices at 645 Bourse, Philadelphia, Pa.*

MISSISSIPPI.

Bay St. Louis—Lumber Mills.—Bay Manufacturing Co., with capital stock of \$30,000, has been incorporated to conduct lumber business by Dewitt Bacon, W. B. Gillicann and others.

Brookhaven—Oil Mill and Fertilizer Factory.—It is reported that Pearl River Lumber Co. is arranging for establishment of a 60-ton cottonseed-oil mill and fertilizer factory, to be operated in connection with its lumber plant.

Brookhaven—Laundry.—Brookhaven Ice Co. will, it is reported, operate steam laundry in connection with its ice factory.

Brookhaven—Oil Mill and Fertilizer Factory.—Louis Cohn, David Cohn, H. Zwirn and others will incorporate Progressive Oil Mill & Fertilizer Co., with capital stock of \$50,000, for erection of an 80-ton cottonseed-oil mill, etc.

Logtown—Mercantile.—Chartered: Lewis-Herman Company, with capital stock of \$30,000, by Morris Lewis and others.

McHenry—Shingle Mill.—D. J. Sutherland will rebuild his burned shingle mill, installing a larger plant.

Meridian—Cigar Factory.—Mississippi Cigar Manufacturing Co. has been organized for manufacture of cigars. W. H. Ingram of Selma will be manager.

Natchez—Oil Reservoir.—H. P. Brawley is interested in the establishment of an oil reservoir with capacity of 100,000 barrels.

North Carrollton—Oil Mill.—An oil mill of

from twenty to forty tons capacity will be erected. Address W. H. Neill.*

Terry—Water-works.—City has voted the issuance of \$10,000 of bonds for water-works previously reported. Address "The Mayor."

MISSOURI.

Cape Girardeau—Planing Mill.—Union Lumber Co., reported recently as incorporated, will erect large planing mill; Theo. Ochs, secretary, North Main street and Levee.*

Enon—Lead and Zinc Mines.—Eureka Mining & Developing Co. has been organized, with Walter M. Farmer, president; W. H. H. Brown of De Soto, vice-president; David E. Gordon, secretary, and D. P. Roberts, treasurer, for development of lead and zinc mines, of which the company controls 457 acres. The officers are negroes.

Kansas City—School-supply Company.—Midland School Supply Co. has been incorporated, with capital of \$10,000, by A. P. Abbott, R. H. Ragland, Walter Allison and others.

Kansas City—Tie Company.—Sedgwick Tie Co. has been incorporated, with capital stock of \$100,000, by L. M. Sedgwick, D. W. Pratt and Cyrus Crane.

Kansas City—Box Factory.—United Box Manufacturing Co. has been incorporated, with capital stock of \$10,000, by Albert Karlson, G. W. Nichols, R. A. Church and others.

Kansas City—Carriage Company.—Chartered: Zartman-Thalman Carriage Co., with capital stock of \$40,000, by Alfred Zartman, John H. Thalman and R. M. Harrison.

Lexington—Water-works.—City will probably construct system of water-works; G. M. Williams, chairman committee.

Seneca—Oil Mill.—Brinson Judd Grain Co. of St. Louis is rebuilding Huber oil mills at Seneca, recently purchased, and will soon put same in operation.

St. Louis—Belted Factory.—Shultz Belting Co. has increased capital from \$300,000 to \$360,000 and purchased additional ground on which it is erecting new plant at a cost of \$40,000 for increasing capacity.

St. Louis—Bottling.—Chartered: South End Bottling Co. has been incorporated, with capital stock of \$14,000, by William E. Huppert, Wm. Q. Uprecht and Henry Hanz.

St. Louis—Mining.—St. Louis Moniteau Mining Co. has been incorporated, with capital stock of \$140,000, by N. O. Tate, Amos E. Stetson, R. R. Vaughan and others.

St. Louis—Axle Works.—Chartered: Brownell Roller Ball Axle Co., with capital stock of \$100,000, by Frank H. Koch, P. H. Bopp, J. Black and others.

St. Louis—Mercantile.—Chartered: Murphy Dry Goods Co., with capital of \$5000, by Samuel Nowrey and others.

St. Louis—Marble Company.—Chartered: Weis & Jennett Marble Co., with capital of \$3000, by James Weis, Geo. Jennett and others.

St. Louis—Pharmacy.—Chartered: Jefferson Avenue Pharmacy, with capital of \$2100, by Henry M. Schultz, H. L. Wichmann and Geo. G. Berg.

St. Louis—Mercantile.—Chartered: John Neun Dry Goods Co., with capital of \$2000, by G. Cramer and others.

St. Louis—Chemical Works.—St. Louis Chemical Co. has been incorporated (under New Jersey laws), with capital stock of \$1,000,000, to manufacture bleaching powder, caustic soda, etc., by David E. Harrison, John Faulkner and Geo. H. Coulter, all of East Orange, N. J.

St. Louis—Clothing Company.—Eagle Clothing Co. has been incorporated, with capital of \$4000, by J. Gardner, F. Gardner and M. Siegel.

Whitewater—Mercantile.—Whitewater Mercantile Co. has been incorporated, with capital of \$5000, by W. O. Medley, J. S. Medley and J. M. Slagle.

NORTH CAROLINA.

Caldwell County—Timber-land Development, etc.—Geo. O. Shakespeare and associates of Norwood, Pa., have purchased 43,000 acres of timber lands in Caldwell county from the Caldwell Land & Lumber Co., and will erect large saw-mills for developing the property; erection of wood-alcohol plant and pulp mill is also under consideration. The land contains deposits of granite, kaolin and magnetic iron ore.

China Grove—Flour Mill.—C. J. Deal & Co. will erect flour mill.

Dunn—Chair Factory.—Oregon Chair Co. has been incorporated for establishment of a chair factory.

Dunn—Oil Mill.—Dunn Oil Co. has been organized, with \$25,000 capital, for the erection of a cottonseed-oil mill. E. F. Young is presi-

dent, and J. D. Stewart, secretary-treasurer.*

Elizabeth City—Shoe Factory.—John Wallace of New Berne, N. C., is investigating with a view to establishing a shoe factory at Elizabeth City.

High Point—Chair Factory.—Southern Chair Co. is erecting two-story addition 150 feet long and installing machinery to increase capacity to 1000 chairs daily.*

Lenoir—Lumber, Mining and Manufacturing.—John H. Danenhower of Bethayres, Pa.; Wm. J. Merrill of Philadelphia, Pa., and Walter B. Watson of Lenoir have incorporated Pennardian Lumber & Manufacturing Co., with capital stock of \$3,000,000, for conducting general lumber, mining and manufacturing business.

Lexington—Furniture Factory.—J. C. Morris of Greensboro, N. C., has contract for erecting the entire plant of Elk Furniture Co., recently reported; cost \$18,750.*

Lexington—Mining.—Chas. M. Cassell of Norfolk, Va., and W. J. Brent of Portsmouth, Va., have purchased the Abbott's Creek mine from Capt. H. F. McCarty near Lexington, and will install additional new machinery and develop on an extensive scale.

Lincolnton—Knitting Mill.—John E. Rudisill Manufacturing Co., recently reported incorporated with \$75,000 capital, will establish mill for knitting hosiery and underwear; J. M. Roberts, secretary-treasurer.

Madison—Hardware and Furniture Company.—Penn Hardware & Furniture Co. has been incorporated, with capital stock of \$25,000, by J. A. Fuller, S. J. Penn, R. A. McGehee and others.

Milledgeville—Water-power-Electrical Development.—It is stated that Whitney Reduction Co. has decided all plans for its extensive water-power developments on Yadkin river, previously reported. The company's president is credited with stating that plans include a granite dam 1500 feet long, 40 feet high, 50 feet through the base; the water will be directed through canal four and one-half miles long to forebay, and thence through penstocks to develop 20,000 horse-power for electrical transmission to Salisbury, Charlotte and other cities within a radius of eighty miles; power-house will be of stone and brick, 100x300 feet, and cost \$200,000, while the machinery to be installed in same will cost \$600,000. The company expects to have the first development completed within two years, and then will commence the second development. It is the intention to build large cotton factory, fertilizer factory, tannery and other enterprises to assist in utilizing the power. About \$5,000,000 is said to be the estimated cost of all the development work. E. B. C. Hambley, president and general manager of company, has headquarters at Salisbury, N. C.; Geo. I. Whitney of Pittsburg, Pa., is vice-president, and H. L. W. Hyde of Pittsburg, secretary.

Mooresville—Creamery.—Mooresville Creamery Co. has been incorporated, with capital stock of \$15,000, probably for operating the creamery lately reported to be established by C. G. Voigt of Harrisonburg, Va.

Pittsboro—Bobbin Factory.—J. Haughton Irlie contemplates establishing a bobbin factory.*

Salisbury—Cross-arm Factory.—Peacock Manufacturing Co. contemplates erecting a factory for the manufacture of cross-arms.*

Statesville—Knitting Mill.—N. B. Mills contemplates the erection of a mill to knit fleeced-lined underwear.

Statesville—Chair Factory.—J. G. Powell contemplates organizing company for establishment of chair factory.*

Weldon—Brick Works.—Chockeyotte Brick Co. has been incorporated, with capital stock of \$10,000, by James T. Gooch, John R. Turner of Weldon and C. J. Rhem of Tillery, for operating the brick works recently purchased by John R. Turner from T. L. Emry.

Weldon—Brick Works.—J. S. Turner has purchased at \$6000 the brick works of T. L. Emry; will improve and operate the plant.

Wentworth—Flour Mill.—Jas. V. Price of Wentworth and Pleas McMichael of Madison, N. C., will erect flour mill.

Wilmington—Music Company.—Chartered: Smith Music Co., with capital stock of \$1500, by N. L. Smith and others.

Wilmington—Kindling-wood Factory.—American Wood Specialty Co., 29 Broadway, New York, confirms the report given last week that it has purchased a factory at Wilmington and will there manufacture kindling wood and other specialties; will also establish other plants on the coast as far as Florida.

Wilmington—Fertilizer Storage.—Armour Fertilizer Works, lately reported, states that it has made arrangements for materially in-

creasing its fertilizer storage at Wilmington, but no machinery will be installed; it has no intention to erect fertilizer plant.

Wilmington—Gaslighting Plant.—Y. M. C. A. contemplates the installation of plant for furnishing gaslight to its buildings. Address Geo. H. Fitch, secretary.*

Wilson—Tobacco Factory.—W. T. Clark & Co. have let contract for erection of an addition 150x50 feet to their tobacco factory; will install boiler and other machinery for increasing capacity.

Winston—Knitting Mill.—Shamrock Mills is adding machinery, as was reported last week; now has 100 machines, and is constantly adding to this equipment.

SOUTH CAROLINA.

Columbia—Sewerage System.—The city has awarded contract to A. P. Montague & Co. of Chattanooga, Tenn., at \$24,023.90 for furnishing the pipe to be used in constructing the municipal sewerage system previously mentioned. Guild & Co. of Chattanooga, Tenn., received the construction contract at \$78,164.30. City Engineer Ludlow will have charge of work, furnishing surveys, plans, etc.

Dunbar—Bobbin and Shuttle Mill.—John Calhoun contemplates establishing bobbin and shuttle mill.*

Florence—Water Mains.—City will vote on issuance of \$10,000 for extending its mains. Address "The Mayor."

Gaffney—Carpet Mill.—Report of last week as to Gaffney Carpet Manufacturing Co. intending to add 100 looms was an error.

Orangeburg—Sheet-iron and Metal Plant.—Southern Metal Co., reported recently as incorporated, has building fully equipped for manufacture of steel collings, galvanized-iron cornices, light wrought-iron work, etc., and will, in addition, manufacture sheet-iron heaters and tin wares.

Sarratt—Flour Mill.—Dr. S. G. Sarratt contemplates erecting a 25-barrel flour mill.

Sumter—Ice Plant.—Sumter Ice Manufacturing Co. will rebuild at once its ice plant, reported burned; capacity will be sixty-seven tons daily.*

Waterloo—Milling.—Waterloo Milling Co. has been incorporated, with capital of \$3000, by J. W. Wharton and J. R. Anderson.

TENNESSEE.

Athens—Knitting Mill.—R. J. Fisher's knitting mill, reported last week, will cost about \$15,000, and is to include dyeing plant also.

Bristol—Candy Factory.—Borden & Lewis will form a \$20,000 stock company to enlarge and continue their candy factory.

Centerville—Button Factory.—J. H. Brown contemplates establishing a pearl-button factory.*

Chattanooga—Cradle Factory.—A. W. Green and A. Woodward (address care Auditorium Hotel) propose organizing company to establish baby cradle and carriage factory.

Dyersburg—Flour Mill.—Forked Deer Mill Co. is reported as to erect 200-barrel flour mill.

Gleason—Cotton Compress, etc.—Obe and Bud Parks have purchased interests in the two Gleason cotton gins, and will consolidate them and install round-bale press.

Hohenwald—Lead and Silver Mine.—Company is being organized with Dr. W. D. Du Vault, president; W. E. Beard, vice-president, and Peter Schild, secretary-treasurer, for development of lead and silver mines in Lewis county.

Johnson City—Woodworking Factory.—J. D. Weaver, Sons & Co. have purchased plow-handle factory, as recently reported, and will equip it as a general woodworking factory.

Kenton—Brick and Tile Works.—Kenton Brick & Tile Co., recently reported incorporated, will manufacture brick, tile and earthen wares.

Knoxville—Compress.—Dixie Compress Co. has been incorporated, with capital stock of \$50,000, by Cyrus Kehr, Alford F. Sanford, James A. Fowler and others.

Knoxville—Harness Factory, Fertilizer Factory and Implement Works.—American Harness Co., manufacturer of harness, etc., and Broyles, McClellan & Lackey, manufacturers of agricultural implements and fertilizers, have consolidated, and will operate on an enlarged scale under name of Broyles, McClellan & Lackey Company. The fertilizer plant will be enlarged at once and other improvements made. Address 316 Gay street.

Knoxville—Overall Factory.—S. Montgomery Smith, F. H. Henderson, W. B. Caldwell and others have incorporated Tennessee Union Overall Co. for the manufacture of a patented overall suit.

Knoxville—Veneer Mill.—The erection of a veneer plant is contemplated by a local

party, who is desirous of interesting an experienced manufacturer in that line. For information address J. M. L., P. O. Box 325.

Knoxville—Suspend Factory.—Ashmore & Hinton have established a suspend factory at 206 Vine avenue.

Leftwich—Flour Mill.—E. A. Alsip will, it is reported, erect a 40-barrel flour mill.

Memphis—Grain Elevator.—J. W. Cassidy, agent of Export Storage Co. of Cincinnati, Ohio, was investigating during the week. It is said, with the intention of erecting grain elevator in Memphis.

ML Pleasant—Oil Wells.—A. B. Rains, F. J. Ewing, R. C. Ewing, J. W. Howard of Columbia, Tenn., have organized Duck River Valley Oil & Gas Co., with capital stock of \$30,000, and contracted with Mahoney & Menz of Philadelphia for sinking eight-inch well 2000 feet deep in Marshall county.

Nashville—Cold-storage Plant.—Hammond Packing Co., Hammond, Ind., will erect cold-storage plant at Nashville at a cost of about \$12,000; H. P. Fritz, local agent.

Nashville—Paint Factory.—C. K. Colley is preparing plans for five-story brick building to cost \$5,000 for Beasley & Sons, to be equipped as a paint factory at a cost of \$20,000.

Pomona—Stave Mill.—Mr. Humble is reported as to equip a stave mill.

Shelbyville—Water-power Development.—W. A. Frost and associates have purchased Wilhoite mills property and will utilize the water-power in establishment of an electric plant to transmit power to a large mill to be erected.

Sparta—Electric-light Plant.—Sparta Electric Light & Power Co. has been incorporated, with capital of \$500, by J. A. Eagle, J. L. Dillrell, C. P. Hutchinson and others.

TEXAS.

Bay City—Mercantile.—Chartered: Bay City Grocery Co., with capital stock of \$10,000, by R. W. Wyne, G. B. Harris and G. H. Sweeney.

Beaumont—Oil Wells.—Producers' Oil Co. has been incorporated, with capital stock of \$1,500,000; James Hopkins of St. Louis, Mo., president; W. T. Campbell, vice-president; Rod Oliver, treasurer, and George M. Craig of Port Arthur, secretary.

Beaumont—Electric Plant, Ice Factory, etc.—Beaumont Ice, Light & Refrigerating Co. has increased its capital, as lately reported, for \$125,000 improvements now in progress; electric plant will be removed to another building and additional machinery installed; ice factory of seventy-five tons capacity is being built; water mains are being extended, etc.

Beaumont—Oil Refinery.—Union Oil & Refining Co. expects to begin work soon on construction of its plant to refine oil by a new patented process.

Beaumont—Oil Refinery.—Tom C. Swope will organize company capitalized at \$1,000,000 to build a plant for refining crude oil to be used in making a substitute for rubber.

Bryan—Farming.—Robert R. Smith, Chas. Puyeur and J. W. Carson of College Station will organize as Smith, Puyeur & Carson, capital stock \$50,000, for conducting general farming and truck growing business.

Center Point—Flour Mill, etc.—Center Point Roller Mills Co. has been incorporated, with capital stock of \$20,000, to operate flour mill, grist mill and cotton gin, by T. D. Wills, W. H. Witt and J. W. Wilson.

Cooper—Ice Plant, etc.—Cooper Light & Manufacturing Co. has increased its capital from \$20,000 to \$40,000, as was reported recently, and will install shale dryer; also will erect 10-ton ice plant in the near future.

Center Point—Mercantile.—Chartered: Center Point Mercantile Co., with capital stock of \$40,000, by J. L. McElroy.

Crockett—Cannery.—Efforts are being made for organization of company to erect canning factory. D. J. Nunn, C. L. Edmiston and F. H. Bayne are among those interested.

Cumby—Oil Mill.—Cumby Oil & Cotton Co., recently reported incorporated with \$35,000 capital, will build two-press cottonseed-oil mill; R. W. Harris, secretary.

Dallas—Lumber Company.—Incorporated: Beattie Lumber Co., capital stock \$10,000, by F. W. McGuire, John M. Beattie and C. W. Beattie.

Dallas—Electric-light and Power Plant.—C. H. Alexander has received franchise for establishment of the electric-light and power plant reported recently.

Dallas—Terminal Improvements.—Dallas Terminal Railway & Union Depot Co. states that the improvements reported last week will be commenced at once, and about \$500,

000 is to be expended on laying of additional tracks, erection of depot, etc., improvement of shops, etc. W. C. Connor is president.

Fort Worth—Oil Wells.—Millers Oil Co. has been incorporated, with capital stock of \$20,000, by J. N. Rayzor, F. A. McLellan, Frank Kell of Wichita Falls and Glen Walker of Fort Worth.

Fort Worth—Iron Works.—Lee M. Rumsey and Geo. F. Speer have purchased, will improve and operate the Fort Worth Iron Works.

Galveston—Brewery.—Galveston Brewing Co. has been incorporated, with capital stock of \$500,000, for construction and operation of a brewery, by B. H. Peters, H. Wilkins and B. Adoue.

Houston—Oil Wells.—Douglas Oil Co. has been incorporated, with capital stock of \$100,000, by J. M. Haws, S. R. Hickman, John Horton and others of Johnstown, Pa.; P. B. Plots of Pankey, Texas, and others.

Houston—Cotton-oil Mill.—Houston Cotton Oil Co. will install four new presses, together with other machinery, for increasing capacity of its plant.

Marlin.—E. E. Wright of Wills Point, Texas, will, it is reported, soon begin work of construction on proposed water-works at Marlin.

Midland—Hardware and Windmill.—Chartered: Western Windmill & Hardware Co., with capital stock of \$60,000, by T. J. Martin, Geo. E. Cowden and E. J. Mumford.

Nacogdoches—Knitting Mill.—Seale & Donagan propose the establishment of a mill for knitting hosiery.

Navasota—Provision Company.—Incorporated: Smith Provision Co., capital \$500, by M. G. Smith, Ward Templeton and R. A. Sangster.

Paris—Mattress and Excelsior Factory.—Paris Mattress & Excelsior Co. is rebuilding its plant.

Paris—Shoe Company.—Hub Shoe Co. has been incorporated, with capital stock of \$10,000, by R. R. Baker, J. L. McKnight and O. B. McKnight.

Richmond—Rice Mill.—Fort Bend Rice Milling Co. has been incorporated, with capital stock of \$50,000, by W. E. Anderson, D. S. Cagle, C. A. Beasley and others.

San Antonio—Oil Wells.—Alamo City Oil Co. has increased capital stock from \$25,000 to \$50,000.

Shafter—Mines.—Incorporated: Chinatte Mining Co., capital stock \$300,000, by John J. Cochran of St. Louis, Mo.; P. C. Blain, John T. Burkett, G. F. Miles of Elliott, Ark.; J. W. Brown, W. P. Ritchie of Camden, Ark.; G. H. Brooks, James Mann and John W. Hampton of Shafter, Texas.

Weatherford—Telephone Line.—Incorporated: Oklahoma Southwestern Telephone Co., capital stock \$100,000, by J. R. Crabtree, Nora Lee Davis and Charles E. Davis.

Wichita Falls—Telephone System.—Texas Telephone Co. has increased capital stock from \$12,000 to \$24,000, as recently reported, for the purpose of extending its lines.

VIRGINIA.

Auburn Mills—Flour Mill.—Dr. J. A. Terrell will erect a 25-barrel flour mill.

Basic City.—It is reported that R. D. Rose and O. O. Cooper of Hinton, Va., will buy and put in operation the Basic City Car Works.

Bentonville—Flour Mill.—Fielding Bros. will, it is reported, build flour mill.

Buena Vista—Brick Works.—A company has organized, with capital of \$20,000; A. N. Johnston, president; D. L. Pitzer, vice-president, and H. J. Quandt, manager. It has purchased and will continue the brick works of Quandt & Pitzer.

Cave Spring—Flour Mill.—Cave Spring Milling Co. will, it is reported, erect a 100-barrel flour mill.

Coakley—Pickle Factory and Telephone System.—W. D. Reamy and Wm. H. Peden will construct telephone system and erect a pickle factory.

Danville—Cotton Mill, Water-power Development, etc.—John Wood and N. Linde of New York and W. W. Waddill of Danville, Va., are negotiating the sale of water-power property on the Dan river to Boston parties, who propose developments. It is said the power has been surveyed and plans made for a dam to develop the power, which is to be electrically transmitted for operating a cotton factory the capitalists will erect and other industries, probably \$1,000,000 to be invested.

Fredericksburg—Cannery.—W. W. Roberts of Roberts Bros. of Baltimore, Md., is said to contemplate erecting cannery at Fredericksburg.

Graham—Water-works.—City contemplates constructing system of water-works; O. A. Metcalfe, recorder.

Keysville—Flour and Saw Mill.—W. L. Russell will install flour-mill machinery and saw-mill.

Leesburg—Telephone Line.—R. N. Harper, E. B. White, N. S. Purcell and others will build long-distance telephone line from Leesburg to Washington.

Lexington—Electric-light Plant.—Lexington Light & Power Co. will make important improvements to its plant, including entirely new are plant to be installed, etc.

Martinsville—Telephone System.—City has granted franchise to Martinsville Telephone Co. for construction of telephone system previously mentioned.

Martinsville—Woodworking Factory.—J. L. Stultz and H. C. Turner are erecting a plant for manufacture of tobacco boxes, lumber and builders' materials.

Newport News—Brick Works.—Oldfield Brick Co. is the title of company reported incorporated recently to operate Oldfield Brickyards. Main office is at 2510 Washington avenue (but the plant is at Oldfield wharf); John Fair, secretary.

Newport News—Granite Quarry.—Swift Creek Granite Co., composed of West Richardson and W. A. Howald, has erected a crusher plant, and is now turning out 300 tons of crushed granite per day.

Newport News—Iron Foundry.—Newport News Shipbuilding & Dry-Dock Co. has taken possession of Caskey foundry recently purchased, the price being quoted as \$35,000. The plant will be overhauled at once and made ready for operation.

Pumpkin City—Flour Mill.—P. P. Pankey will erect a 30-barrel flour mill and install cornmeal outfit.

Radford—Woolen Mill.—Radford Woolen Manufacturing Co. has been incorporated, with Geo. W. Miles, president; L. L. Fauler, vice-president-general manager, and Fred Painter, secretary-treasurer.

Richmond—Stockyards.—Southern Packing Co., recently reported as organized by W. S. Forbes & Co., has had plans made for proposed abattoir by Chicago architects; building will be three stories, of brick, 160x90 feet, and equipped with the latest and most improved abattoir machinery at a cost of \$50,000; capacity will be 100 head of cattle and 500 hogs per day.

Richmond—Bridge.—Richmond Pass. & Power Co. will build a bridge across the James river, distance about 2500 feet, modern steel structure, to cost about \$100,000. Calvin Whiteley, Jr., is chief engineer.

Ruskin—Flour Mill.—W. A. Baines will erect a three-stand roller mill, and has not let contract for machinery.

South Boston—Corn and Cereal Mill.—Cooley Milling Co. has secured site for proposed 600-bushel corn and cereal mill, which will be operated by electricity. Contracts for motors to develop power or machinery for mill have not been awarded.

Staunton—Drug Company.—Basic City Drug Co. has been incorporated, with capital stock from \$2000 to \$10,000. R. W. Crowder is president; James M. Coyner, vice-president, and W. W. Glass, secretary-treasurer.

Tom's Brook—Lime Plant.—Rockdale Lime Co. has organized and purchased lime plant of M. L. Bauserman, which will be improved and enlarged; C. W. Jones, president, and M. L. Bauserman, manager.

WEST VIRGINIA.

Austin—Coal Mines.—It is reported J. M. Guffey of Pittsburgh, Pa., has purchased the Austin Coal Works at Austin for \$125,000.

Clarksburg—Oil Company.—McKelvey Oil Co. has been incorporated, with authorized capital of \$50,000, to conduct general coal, oil and timber business, by L. M. Kelley, C. A. Morrison, J. B. Supler and A. Bowen.

Cowen—Lumber Mills.—Union Lumber Co., reported incorporated (under Charleston) last week, has organized with G. N. Barrieklow of Connellsville, Pa., president; H. P. Berryhill, vice-president, and H. W. Barrieklow, secretary. Company owns and will develop 3000 acres of poplar and oak timber in Webster county, with mills at Cowen and Wainville. Capital is \$30,000.

Fairmont—Check Hook Works.—Backus Safety Check Hook Manufacturing Co., A. L. Colgrove, manager, Sneathport, Pa., will establish plant at Fairmont, as recently reported.

Gap Mills—Flour Mill.—J. M. Reed contemplates erecting a 25-barrel flour mill.

Grantsville—Publishing.—Chartered: Grantsville News Publishing Co., with authorized capital of \$10,000, by H. M. O'Brien.

ness, C. E. Williamson, A. D. Ireland and others, all of Parkersburg, W. Va.

Hancock Station (not a postoffice)—Sand Works.—J. Frank Fields, M. E. Fields, John Brooks and others, all of Hancock, Md., have incorporated Keystone White Sand Co., with authorized capital of \$50,000, for mining and manufacturing sand for all purposes.

Junior—Coal Mines.—Weaver Coal Co. of Chicago, Ill., has purchased the Arbogast coal lands at Junior, and will erect tipple and a number of tenements at once.

Mannington—Glass Factory.—It is reported that Caleb Burt is making arrangements to establish a large window-glass factory.

Morgantown—Window-glass Factory.—Marilla Co-operative Window Glass Co. has been incorporated for manufacturing window and blown glassware of all descriptions, with authorized capital of \$100,000, by W. H. Lewis, H. A. Limpert, M. C. Cornack, W. Gifford and others, all of Bradford, Pa.

Parsons—Pulp and Paper Mills.—Parsons Pulp & Paper Co. will install \$30,000 worth of new machinery, which will enable it to produce 125,000 pounds of bleached pulp per day.

Preston County—Coal Lands.—Edward Reed of Fairmont, W. Va., acting for J. M. Guffey of Pittsburgh, Pa., has paid \$50,000 for coal lands in Preston county.

Preston County—Coal Lands.—Reports state that A. B. White and Geo. M. Bowers of Charleston, W. Va., have purchased for \$20,000 about 4000 acres of coal lands for future developments.

Reynoldsville—Coal Mines.—E. A. Humphries of Scottsdale, Pa., and others are preparing to open mines on a 2500-acre tract of coal land they bought recently.

Stouts Mills—Flour Mill.—Mace Bros. have purchased and will remodel flour mill.

Weston—Gas Works.—Geo. V. Farman, Howard Farman and Clifford R. Hawkins of Buffalo, N. Y., have organized Weston Gas Co., with capital stock of \$100,000, for establishing a gas plant at Weston.

Wheeling—Glass Plant.—John Waterhouse, John Devine and others propose forming company to acquire and put in operation the Hobbs Glass Works.

INDIAN TERRITORY.

Antlers—Ice Plant.—A. L. Lesueur has contract for a five-ton ice plant.

Ardmore—Mercantile.—Perminington Grocery Co. has been incorporated, with capital stock of \$150,000, by J. R. Perminington and others.

Ardmore—Coal and Power Company.—Ardmore Coal & Power Co. has been incorporated, with capital stock of \$50,000, by Mrs. Mary A. Ford, Sidney E. Ford, E. F. Ensworth, Sam A. Weeks and others.

Chickasha—Brick Works.—Messrs. Shreve & McFarling are establishing the Chickasha Brick Manufacturing, which will have capacity of 20,000 bricks per day.

Collinsville—Mercantile.—Chartered: Collinsville Mercantile Co., with authorized capital of \$24,000, by C. J. Dealin, Topeka, Kan.; F. E. Wear, W. A. Allison of Kansas City, Mo.; W. S. Edwards of Collinsville and others.

Sulphur—Mines.—Arco Mining Co., recently reported incorporated, has organized with Jacob H. Wright, president, and Roy C. Oakes, secretary, and will develop mines in Shawnee Reservation; \$25,000 is the capital.

OKLAHOMA TERRITORY.

Arapahoe—Telephone Company.—Chartered: Oklahoma Western Telephone Co., with capital of \$5000, by C. W. Goodwin, T. J. Nance, L. A. Love, O. P. Coffin, W. H. Coleman and Ambury Lacy.

Cordell—Land Improvement.—Cordell Improvement Co. has been incorporated, with capital of \$4000, for platting "New Cordell," by J. W. Corlett, J. W. Smith, G. H. Rawley, R. A. Billups and others.

Jet—Oil and Mining Company.—Saline Oil & Mining Co. has been incorporated, with capital stock of \$500,000, by W. C. Dunn, F. P. Cary, Wm. Jett and others.

Lawton—Ice Plant and Water-works.—L. L. Hawes and John M. Scott of Fort Worth, Texas, have franchise for water-works, and will expend about \$30,000 for construction; also will build a 30-ton ice plant.

Lawton—Lead Mines.—L. L. Hawes and John M. Scott of Fort Worth, Texas, have purchased lead mines, and will institute development.

Leger—Cotton-oil Mill.—W. T. Waggoner of Deatur, Texas; C. C. Hightower, J. A. Henry and others have incorporated \$100,000 company for establishment of cottonseed-oil mill.

Oklahoma City—Brewery.—Incorporated:

Moss Brewing Co., with \$75,000 capital stock, by B. B. Moses, John Wild and Wm. Sherer.

Oklahoma City—Electric and Gas Plant.—Oklahoma City Electric Light Co. will expend \$200,000 to enlarge its electric-light plant and erect a gaslighting plant.

Oklahoma City—Oil Refinery.—James K. Parker and H. J. Parrish of Memphis, Tenn., are reported as contemplating erection of oil refinery at Oklahoma City.

Oklahoma City—Mercantile.—Chartered: Carroll-Brough-Robinson Wholesale Grocery Co., with capital stock of \$100,000, by J. T. Robinson and others.

Ponca City—Water-works.—City will expend \$7000 in extending its water mains and \$300 in construction of a reservoir; Jos. Hutchinson, mayor.

Pond Creek.—City has voted issuance of \$5,000 of bonds for construction of system of water-works, to include two pumps, two boilers, steel tower 120 feet high, 50,000-gallon tank, two and one-half miles of mains, etc.; W. H. McKinley, mayor.

BURNED.

Clem, Ga.—J. J. Holloway's cotton gin: loss \$3000.

Coriscana, Texas.—Coriscana Cotton Oil Mill: loss reported as \$125,000.

Dyersburg, Tenn.—J. L. Burtle's bottling plant.

Eufaula, Ala.—W. D. Andrews' cotton gin.

Hinesville, Ga.—T. N. Winn's cotton gin and grist mill.

Louisville, Ky.—Louisville Bolt & Iron Co.'s plant; estimated loss \$100,000.

Tupelo, Miss.—Tupelo Compress Co.'s plant; estimated loss \$30,000.

BUILDING NOTES.

Americus, Ga.—Business Building.—M. S. Holliday is having plans made for erection of a three-story brick business building.

Atlanta, Ga.—Depot.—The depot commission, composed of Governor A. D. Candler, chairman; J. Ferris Cann, John N. Holder, Thos. Eggleston, G. V. Gress and others, have adopted a resolution providing for the employment of an engineer or architect to investigate the State's terminal property and prepare ground plans for proposed union passenger station.

Baltimore, Md.—School.—Board of awards, care Geo. N. Numsen, city register, will open bids March 12 for erection of school building, to furnish heating plant for same; bids must be in separate envelopes; certified check must accompany each bid—\$1000 for building and \$500 for heating plant. Plans and specifications can be seen at office of inspector of buildings, Edw. D. Preston. Bond required and usual rights reserved.

Birmingham, Ala.—Depot.—Southern Railway Co. has awarded contract to Evans Bros. for erection of proposed freight depot; building will be of corrugated iron, and cost \$10,000.

Birmingham, Ala.—Office Building.—T. C. Thompson & Bros., contractors for Title Guarantee, Loan & Trust Co.'s \$150,000 office building, have obtained permit for same; structure to be of brick, steel and terra-cotta, 50x100 feet, first story seventeen feet high and the other eight be eleven feet six inches each, etc. W. C. Weston is the architect.

Birmingham, Ala.—Temple.—Masonic Temple Association has been incorporated for erection of a temple by M. T. Stradford, J. B. Cobbs, J. A. Downey, John G. Smith and others.

Bluefield, W. Va.—Office Building.—Bluefield Land & Title Co. will let to contract about May 1 the erection of its \$20,000 building after plans by H. H. Huggins, architect, No. 1 Tipton Building, Roanoke, Va.

Bristol, Tenn.—Hotel.—Gorden Fuqua will rebuild the Nichols Hotel, recently mentioned; \$50,000 will be expended.

Chattanooga, Tenn.—Residence.—H. Gibson will erect \$5000 two-story brick residence.

Church Point, La.—Bank Building.—Commercial State Bank of Church Point (organizing) will receive plans and specifications for erection of new brick building. H. Barousse is president.

Columbia, S. C.—Church.—Bids will be opened March 4 for the erection of the proposed building for Associate Reformed Presbyterian Church. Plans and specifications at office of C. C. Wilson, architect.

Columbia, S. C.—Business Block.—Edwards & Walter are preparing drawings and specifications for a business block to be erected by Dr. L. B. Owens.

Crowley, La.—Courthouse.—G. Howard Brooks, secretary police jury, will open bids

April 26 for erection of courthouse for Acadia parish, according to plans and specifications of J. Riely Gordon Co. of Dallas, Texas, and Shreveport, La., and W. L. Stevens of Crowley. Proposals must be accompanied by certified check for \$2000; plans and specifications on file with architects; \$20,000 bond required; usual rights reserved.

Dallas, Texas—Depot.—Dallas Terminal Railway & Union Depot Co.'s proposed \$500,000 worth of improvements will include erection of passenger and freight depots. W. C. Connor is president.

El Reno, O. T.—Courthouse.—Plans of the J. Riely Gordon Co. of Dallas, Texas, have been accepted for the proposed Canadian county courthouse at El Reno; building will be two stories, of brick and stone, 110x90 feet.

Fort Worth, Texas—Apartment-house.—F. B. Gray has permit to build apartment-house, two stories, 52x70 feet, to cost \$12,000.

Galveston, Texas—Carhouse.—Galveston Street Railway will erect 30x100-foot building for car storage, etc.

Galveston, Texas—Library.—Major A. J. Walker, president Rosenberg Library Association, will open bids March 15 for erection and completion of Rosenberg Library building in accordance with plans and specifications on file in office in Oysterman Building, 2303 Strand, or at office of Eames & Young, Lincoln Trust Building, St. Louis, Mo. Proposals must be accompanied by certified check for \$2500. Blank forms of proposals will be furnished. Bond required and usual rights reserved.

Jennings, La.—Town Hall.—City has voted issuance of \$10,000 of bonds for erection of its town hall, previously reported; E. T. Sweet, mayor.

Knoxville, Tenn.—Church.—Centenary Methodist Church will soon ask for plans and specifications for church building to cost over \$5000.

Louis C. H., Va.—Depot.—Chesapeake & Ohio Railroad Co. will build passenger depot; C. E. Doyle, general manager, Richmond, Va.

Louisville, Ky.—Flats Building.—C. A. Curtin has made plans for flats building for M. Bowe.

Louisville, Ky.—Store Building.—Clark & Loomis have made plans for store building for Peoster Gaubert & Co.

Louisville, Ky.—School.—H. P. McDonald has made plans for \$50,000 schoolhouse.

Marietta, Ga.—Hotel.—Chas. S. James of Southern Pines, N. C.; M. M. Sessions and others propose a company to build \$50,000 hotel.

Marlin, Texas—Opera-house.—J. G. Altorf has had plans and specifications prepared for erection of an \$8000 opera-house.

Muskogee, I. T.—Opera-house.—Chartered: Muskogee Opera-House Co., capital stock \$5,000, by A. A. Kinney, A. Z. English and J. M. Miller.

New Martinsville, W. Va.—Hall.—Masonic Fraternity will erect three-story hall, for which plans have not been prepared. Address F. W. Clark.

North Augusta, S. C.—Hotel.—North Augusta Hotel Co. has organized, with capital stock of \$200,000, for erection of the hotel previously reported to be erected by James U. Jackson of Augusta, Ga. James U. Jackson is president; John Blair MacAfee, vice-president, and W. M. Jackson, secretary-treasurer.

Oklahoma City, O. T.—Warehouse.—Reeves Machinery Co. of Columbus, Ind., will build large warehouse at Oklahoma City.

Petersburg, Va.—Club.—Riverside Club has awarded contract to C. T. Williamson of Richmond, Va., for erection of its proposed \$10,000 club building.

Pine Bluff, Ark.—City Hall.—City council is considering the erection of a City Hall to cost \$25,000. Address "The Mayor."

Pine Bluff, Ark.—Cold-storage Plant.—Anheuser-Busch Brewing Association (of St. Louis, Mo.) has let contract to G. W. Huffman for erection of \$6000 building for its proposed local cold-storage plant.

Richmond, Va.—Church Improvements.—M. J. Dimmock has completed drawings for improvements to Bainbridge Street Baptist Church at Manchester to cost \$10,000.

Richmond, Va.—Hotel.—Plans have been prepared for hotel reported previously to be erected by Mrs. A. D. Atkinson, and bids will be called for within a short time; cost of building and furnishings about \$400,000.

Richmond, Va.—Apartment-house.—Chesterfield Apartment Co. has let contract for drawing plans for its proposed house to Muhlberg Bros. of Reading, Pa., and Noland & Baskerville of Richmond; plans will be ready in about two weeks and contracts awarded for erection about April 1; will be

seven stories, of rough red brick with gray-stone front, and cost \$150,000.

Roanoke, Va.—Hall Building.—The Elks Building, which will cost about \$12,500, is to be let to contract about April 15. H. H. Huggins, No. 1 Tipton Building, is architect.

Roanoke, Va.—Office Buildings.—J. F. Barbour has contract to erect \$4000 office building for Dr. A. A. Crumaday. Contracts for erection of Hibernian Lodge Building, to cost \$5000, will be let about March 1. H. H. Huggins, No. 1 Tipton Building, prepared plans for both structures.

Seabree, Ky.—Depot.—Louisville & Nashville Railroad Co. will erect a depot at Seabree; Geo. E. Evans, general manager, Louisville, Ky.

St. Louis, Mo.—Exposition Buildings.—Plans of H. F. W. Hart of Hot Springs, Ark., have been adopted for erection of proposed Arkansas State Building at the Louisiana Purchase Exposition; structure is to cost \$100,000. J. J. Whitaker of Pine Bluff, Ark., is chairman of committee in charge of building.

St. Louis, Mo.—School Building.—Wm. B. Ittner is preparing plans for proposed \$250,000 school building for the city; furnishings will cost \$50,000 more. Contracts will probably be let in April or May.

St. Louis, Mo.—Exposition Buildings.—Lumbermen's Association of the South purposes to erect the \$50,000 club building reported last week entirely of Southern woods, lower floor for exhibition purposes and upper for clubrooms for Louisiana Purchase Exposition. Address W. G. Harlow, secretary of organization, Yazoo City, Miss.

St. Louis, Mo.—Theater, etc.—Efforts will be made to organize a \$40,000 company to erect a building containing theater, clubrooms, bowling alley and restaurant. Address South Broadway Merchants' Association.

Tampa, Fla.—Warehouse.—I. W. Phillips will erect two-story warehouse 50x100 feet.

Tappahannock, Va.—Bank Building.—L. E. Munford of L. E. Munford Banking Co. of Cape Charles, Va., is arranging for erection of three new bank buildings at Warsaw, Tappahannock and Mathews C. H.

Union, S. C.—Warehouse, etc.—Monarch Cotton Mills will erect thirty operatives' cottages and a warehouse.

Waltham, S. C.—School.—Edwards & Walter of Columbia, S. C., are preparing drawings and specifications for school building to be erected at Waltham. Bids will be wanted about March 10.

Washington, D. C.—Office Building.—Arthur B. Henton has prepared plans for an office building for J. H. Rowland of Baltimore and Port Deposit.

Washington, D. C.—Apartment-house.—Ontario Apartment-House Co. has been incorporated, with capital stock of \$300,000, by Chas. D. Walcott, James F. Hood, Geo. S. Rees and others.

Watkinsville, Ga.—School.—Town has voted \$3000 bonds for erection of schoolhouse. Address "Town Clerk."

Wheeling, W. Va.—Flats Building.—Benjamin Beers has awarded contract to D. M. Walters for flats building in accordance with plans and specifications of Charles McCarty; cost \$6500.

Wheeling, W. Va.—School.—Board of education will build high school to cost \$150,000. No plans have as yet been prepared. Address Walter Hall, city clerk, Hub Building.

Winchester, Va.—Bank Building.—Farmers and Merchants' National Bank has accepted plans of Frye & Chesterman of Lynchburg for erection of its proposed \$25,000 building.

Winchester, Va.—Bank Building.—Farmers and Merchants' National Bank has accepted plans of Frye & Chesterman of Lynchburg, Va., for erection of its three-story brick and stone building; cost \$30,000.

RAILROAD CONSTRUCTION.

Railways.

Ackerman, Miss.—About 120 miles of the proposed New Orleans & Mississippi Midland Railroad have been surveyed.

Austin, Texas.—The Houston & Texas Central is surveying a line north from Navasota which is believed to be for a part of an important through north and south line reaching to Corsicana.

Beaumont, Texas.—It is proposed to build a terminal railroad to connect the Beaumont oil field with railroads entering Beaumont.

Beaumont, Texas.—It is reported that the Beaumont, Port Neches & Port Arthur Electric Railway will be incorporated, with \$700,000 capital stock, C. E. Baker to be general manager.

Benton, Ark.—It is expected that construction of ten miles of the Pine Bluff & Western Railroad between Sheridan and Pine Bluff is to begin shortly.

Carrollton, Ky.—The Carrollton & Ohio Valley Traction Co. proposes to build from Snyder, in Trimble county, to Covington. It is reported that a survey has begun.

Citra, Fla.—Surveyors are reported to have located an extension of the Plant system to Orlando Springs.

Collettsville, N. C.—The Caldwell & Northern Railroad, recently purchased by the Caldwell Land & Lumber Co., is to be immediately extended from its present terminus at Collettsville to a tract of timber recently purchased by the company in the western part of North Carolina.

Columbus, Ga.—The Columbus, Eufaula & Gulf Railroad Co. has been chartered, with a capital stock of \$250,000, to build a road from Columbus to St. Andrews Bay, Fla.

Cuthbert, Ga.—It is rumored that the Brunswick & Birmingham Railroad will build an extension to Cuthbert.

Fairmont, W. Va.—Surveys are being made by the Baltimore & Ohio Railroad for the reported purpose of building a second track from Fairmont to a point below Rivesville.

Fredericksburg, Va.—Voters of Rappahannock county will decide on April 3 upon an issue of \$50,000 of county bonds toward the construction of an electric road through the county to Fredericksburg.

Guthrie, O. T.—It is reported that the Missouri, Kansas & Texas Railway Co. will build a line from Guthrie through El Reno and Anadarko southwest into Texas, 150 miles.

Hattiesburg, Miss.—The Pearl & Leaf River Railroad Co. has been given permission to change its western terminal point from Columbia, Marion county, to Monticello, Lawrence county.

Jacksonville, Texas.—The Texas & New Orleans Railroad is surveying a route from the Angelina river to Jacksonville.

Kindrick, Va.—The Mt. Rogers & Eastern Railroad is projected by J. D. Perkins and others.

Lafayette, Ala.—Preliminary work for an extension of the Lafayette Railway into Tallapoosa county is expected to begin immediately.

Lake Providence, La.—The Memphis, Helena & Louisiana Railroad has been granted rights of way through East Carroll parish.

Little Rock, Ark.—It is reported that the Gould system will spend \$1,500,000 in rebuilding the Little Rock & Fort Smith Railroad.

Little Rock, Ark.—George E. Dodge of Little Rock and others are incorporators of the Eldorado & Bastrop Railroad Co., which is to construct a railroad from a point on the Arkansas-Louisiana State line through Ashley and Union counties, Arkansas, forty-five miles to a point on the St. Louis, Iron Mountain & Southern Railway near Eldorado. The capital stock is \$675,000.

Moultrie, Ga.—It is reported that the Atlantic, Valdosta & Western Railroad will build an extension from Valdosta to Moultrie.

Mt. Sterling, Ky.—The Lexington & Eastern Railway is expected to build a branch from Indian Fields to Mt. Sterling.

Nashville, Tenn.—Local capitalists are interested in the Nashville & Lewisburg Railroad Co., which has been chartered, with a capital of \$25,000, to construct a steam or electric road between Nashville and Lewisburg, a distance of about seventy-five miles.

Newcastle, Va.—It is reported that the purchasers of mining properties in Craig and Roanoke counties will build a railroad about twenty-five miles long from Newcastle to Roanoke.

Onancock, Va.—It is reported that the Queen Anne's Railroad Co. will ask for a charter from the Virginia assembly to build through Accomac and Northampton counties a continuation of the extension of its line through Denton, Md., through Federalsburg, Salisbury and Snow Hill.

Palestine, Texas.—It is reported that the International & Great Northern Railroad may build a branch connecting Dallas with the new line now building between Spring & Fort Worth, about forty miles, and an extension of about seventy miles from Houston to Beaumont.

Seguin, Texas.—A committee is soliciting subscriptions to build a railroad from Seguin to a point on the Missouri, Kansas & Texas Railway.

St. Paul, Va.—It is expected that work will shortly begin upon a new railroad to start at the main line of the Clinch Valley division of the Norfolk & Western Railway near St. Paul, Va., to extend northward

about eight miles toward the headwaters of the Big Sandy river. Mr. J. W. Dawson of St. Paul informs the Manufacturers' Record that it is intended to secure a charter for the road in the near future.

Waxahachie, Texas.—The International & Great Northern Railway proposes to extend its line to Waxahachie from Dallas. Surveyors are reported at work locating a route from the Fort Worth extension.

Street Railways.

Birmingham, Ala.—The petition of J. R. Adams and others for a franchise for an electric car line has been granted. It is proposed to construct the road in Birmingham, and to connect Birmingham with Ensley City, Brookside and Bessemer.

Charlotte, N. C.—It is reported that the Charlotte Electric Railway, Light & Power Co. is to extend its line in Charlotte and to Biddleville.

Dallas, Texas.—The Dallas Electric Company has applied for a franchise to build an electric street railway in Dallas, touching every part of the city not now reached by street railway.

Decatur, Ala.—It is reported that J. T. Crass proposes to build an electric street railway in Decatur.

Mobile, Ala.—It is expected that work upon the line of the Mobile Light & Railroad Co. between Mobile and Whistler will begin within a fortnight.

Savannah, Ga.—D. B. Lester has been granted a franchise for a railway on Montgomery street.

Wheeling, W. Va.—The Wheeling Traction Co. proposes to construct a line connecting Bridgeport and St. Clairsville, also a link to Steubenville.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Agricultural Implements.—Henry Dannehl Company, Fredericksburg, Va., wants implements and supplies for farm.

Bleaching Equipment.—J. Lewis Sale, 96 Main street, Dallas, Texas, asks for information and prices on equipment for bleaching in connection with sheeting mill.

Bleaching Equipment.—J. Lewis Sale, 196 Main street, Dallas, Texas, wants estimates on bleaching equipment for sheeting mill.

Bobbin and Shuttle Machinery.—See "Woodworking Machinery."

Bobbin Machinery.—J. Haughton Ibric, Pittsboro, N. C., wants information and prices on machinery for making bobbins.

Boiler.—Scott Roberts, Ironaton, Ala., wants a 40-horse-power return tubular boiler, with complete fittings (part payment in a 25-horse-power portable engine is proposed).

Boiler and Engine.—See "Flour-mill Machinery."

Boilers and Engine.—Geo. H. Ford, 1305 Empire Building, Atlanta, Ga., wants second-hand Corliss engine, or one with Corliss economy, 150 horse-power; also two 100-horse-power boilers.

Boilers and Engine.—See "Cotton-mill Equipment."

Bridge.—Le Gore Combination Lime Co., Le Gore, Md., will be in the market for combination bridge for railroad and roadway.

Boxes.—Newman-Sprangle Co., Limited, New Orleans, La., wants to correspond with parties making light wooden dovetail boxes.

Building Material.—J. C. Morris, Greensboro, N. C., wants prices on tar paper for roofing, tar by the barrel, iron siding, stamped brick, etc.

Canning Equipment.—J. T. Howie, Dadeville, Ala., wants information, prices, etc., on complete canning outfit.

Canning Machinery.—R. L. Plicher, Dothan, Ala., wants information and prices on canning machinery.

Canning Machinery.—Gay Green, Asheville, N. C., wants addresses of makers of canning machinery.

Canning Machinery.—Will H. Suits, Norwood, N. C., wants addresses of makers of canning machinery.

Chair Machinery.—See "Woodworking Machinery."

Coffee Roasters, etc.—Walter L. Donovan, Lampasas, Texas, wants to correspond with manufacturers of coffee roasters, peanut roasters and corn poppers.

Comb Manufacturers.—M. E. Whitehurst, 45 Pollock street, New Berne, N. C., wants addresses of manufacturers of horn (dressing) combs, also manufacturers of rubber combs.

Corn Poppers.—See "Coffee Roasters."

Cotton-mill Equipment.—Hargrove Cotton Mills, Shreveport, La., invites bids on supplying boilers, engine, steam-heating plant, fire-protection apparatus, electric-light plant, shafting, pulleys, hangers, belting, etc. Specifications on view at office, or at office of D. A. Tompkins Co., the engineers, Charlotte, N. C.

Cotton-ropes Mills.—M. E. Whitehurst, New Berne, N. C., wants addresses of mills making cotton and manilla rope.

Dredging.—Sealed proposals will be received until March 21 at United States Engineer Office, Savannah, Ga., for dredging at Doboy Bar, Ga.; information furnished on application; Cassius E. Gillett, captain, engineers.

Drying Equipment.—Cooper (Texas) Light & Manufacturing Co. is in market for equipment to dry shale.

Drying Equipment.—Paducah Textile Co., Paducah, Ky., wants bids on fans, blast heaters and engine to supply drying-room 32x30 feet 6 inches by 7 feet 6 inches in the clear, 120 to 150 degrees Fah., dry air, plenty of wind, with a change of air about twice per minute; also wants separate bids on fans and heaters without engine.

Electrical Machinery.—C. P. Wall, Spray, N. C., wants second-hand dynamo.

Electrical Machinery.—Le Gore Combination Lime Co., Le Gore, Md., will be in the market for turbines and dynamos to develop 5000 horse-power.

Engine.—See "Saw-mill."

Engine.—See "Drying Equipment."

Engine.—Ronda (N. C.) Manufacturing Co. wants 6 to 10-horse-power compound high-speed engine, second-hand.

Fire Extinguishers.—See "Woodworking Machinery."

Flour-mill Machinery.—C. B. Thornburg, Dickson, Tenn., will need engine and boiler, rolls, pulleys and shafting.

Flour-mill Machinery.—A. O. Simpson, Glenn Springs, S. C., wants names of manufacturers of flour-mill machinery.

Flour-mill Supplies.—Edward E. Gordon, Elba, La., is in the market for flour, grits, meal, etc.

Furniture.—P. L. Price, 612 Salem avenue, Roanoke, Va., wants to buy furniture for general store.

Furniture.—Y. E. Orr, Atlanta, Ga., wants patterns for iron-frame school desks and opera chairs; full-sized detail drawings, prices and other information requested.

Gaslight Plant.—Y. M. C. A., Wilmington, N. C., wants to obtain prices on equipment for furnishing gas for lighting by means of gasoline.

Heating Apparatus.—W. C. Hargrove, Pittsburg, Texas, wants proposals for apparatus to heat two-story building 75x100 feet.

Heating Plant.—See item of school building under Baltimore, Md., in "Building Notes."

Heating Plant.—See "Cotton-mill Equipment."

Holting Equipment.—West Richardson, Newport News, Va., is in the market for holting engine with single drum, suitable for holting brick.

Hotel Supplies.—Henry Dannehl Company, Fredericksburg, Va., will want general hotel supplies.

Ice Plant.—Cooper (Texas) Light & Manufacturing Co. will probably want complete 10-ton ice plant.

Ice Plant.—Sumter Ice Manufacturing Co., Sumter, S. C., will need 350 galvanized ice cans 14x14x33, water pumps, ammonia pumps, a lot of extra heavy piping, gaskets and valves.

Knitting Mill.—Seale & Donegan, Nacogdoches, Texas, want full information regarding knitting mill, estimates on plant of 500 to 1000 dozen pairs hosiery daily, etc.

Laundry Machinery.—Olive Sawyer, Georgetown, S. C., wants to correspond with manufacturers of laundry machinery and supplies.

Lighting.—Nicholson & Lance, Hot Springs, N. C., want to correspond relative to the best

lamp for street-lighting purposes, not including gas or electric lighting.

Lighting Plant.—See "Gaslight Plant."

Lime-plant Equipment.—Rockdale Lime Co., Tom's Brook, Va., will be in want of lime-plant equipment.

Lumber-mill Machinery.—Roane & Curll Lumber Co., Weston, W. Va., is in the market for log loader, steam log turner, gang edger, lath machine and equipment of live rolls and chain carriers for portable band mill; also filing-room outfit for eight-inch band saw.

Machine Tool.—Backus Safety Check Hook Manufacturing Co., A. L. Colegrove, manager, Smethport, Pa., will want a die shaper.

Machine Tools.—Soule Steam Feed Works, Meridian, Miss., is probably in the market for a boring or turret lathe that will swing twenty-four inches over ways, new or second-hand.

Mining Equipment.—Liberty Copper Mining & Milling Co. is ready to receive catalogues on mining machinery. Address catalogues to company at Woodsboro, Md., and letters to Bernard J. Krause, president, 645 Bourse, Philadelphia, Pa.

Mining Shaft.—See "Shaft Construction."

Oil-burning Equipment.—Pittsburg (Texas) Cotton Oil Co. wants proposals to equip its plant with oil-burners (two 80-horse-power boilers and one 50-horse-power boiler).

Oil Mill.—Cumby (Texas) Oil & Cotton Co. wants estimates on two-press cottonseed-oil mill.

Oil Mill.—E. F. Young, Dunn, N. C., wants to buy complete cottonseed-oil mill equipment.

Oil Mill.—W. H. Nell, North Carrollton, Miss., wants prices and information on complete equipment for oil mill of twenty to forty tons capacity.

Peanut Roasters.—See "Coffee Roasters."

Pearl-button Machinery.—F. C. Reep, 112 East Gill street, Knoxville, Tenn., wants to correspond with furnishers of or manufacturers of machinery to cut buttons from pearl shells, polish and drill eyes in the buttons, etc.

Pearl-button Machinery.—J. H. Brown, Centerville, Tenn., wants to correspond with manufacturers of pearl-button machinery.

Piping.—See "Ice Plant."

Planing Mill.—Union Lumber Co., North Main street and Levee, Cape Girardeau, Mo., wants to purchase planing mill.

Pulleys, etc.—Southern Chair Co., High Point, N. C., is in market for shafting, pulleys and hangers.

Railway Equipment.—Steadman & Litch, Eastman, Ga., want second-hand 15-ton geared locomotive.

Railway Equipment.—Dallett & Co., 201 Walnut Place, Philadelphia, Pa., want a 30-ton passenger locomotive, American type (Baldwin preferred).

Railway Equipment.—Tar River Lumber Co., Rocky Mount, N. C., wants 60,000 pounds of 25-pound relaying steel rails; quote prices delivered to company's siding, 130-mile post, W. & W. division of A. C. L.

Railway Equipment.—V. S. S. Co., Box 2073, New York, wants a quantity of new or second-hand 40-pound rails, 25-pound rails, angle bars, plain fishplates, switches 7 feet 6 inches long, etc.

Saw-mill.—Hilton & Dodge Lumber Co., Darien, Ga., will probably want Corliss engine and complete saw-mill equipment.

Saw-mill.—Standard Arm & Pin Co., Laurel, Miss., wants new or second-hand pony saw-mill that will cut 15,000 to 20,000 feet of yellow pine daily.

Shaft Construction.—Ramsay-Reilly Engineering & Construction Co., 224 First avenue, Birmingham, Ala., wants bids on sinking of two shafts 500 feet deep, same to be ten feet in diameter.

Shafting and Pulleys.—See "Flour-mill Machinery."

Shipbuilders.—John J. Wescott, Beaumont, Texas, wants to communicate with shipbuilders and owners relative to tugs and the building of light-draft barges.

Smokejacks.—J. W. Tallafarro & Co., 209 Sterling Place, Brooklyn, N. Y., want addresses of makers of smokejacks.

Soap Machinery.—R. L. Plicher, Dothan, Ala., wants information and prices on soap machinery.

Spoke and Handle Lathes.—J. B. Holcombe, Pickens, S. C., wants to correspond with manufacturers of spoke and handle lathes.

Water Supply.—T. B. Lamoreux, quartermaster, office depot quartermaster, Equitable Building, Baltimore Md., will receive sealed proposals in triplicate until March 4

for furnishing all machinery, material and labor required for constructing water supply system at Fort Carroll, Md. Usual rights reserved. Information furnished on application.

Water-wheels.—See "Electrical Machinery."

Water-works, etc.—E. M. Cook, mayor, Hazlehurst, Miss., will open bids March 13 for installation of water-works and electric-light plant. Payments 75 per cent. of engineers' monthly estimates. Bond 50 per cent. of estimated contract price. Usual rights reserved. For specifications, proposal forms, etc., address Coleman & Malochee, engineers, 319 Carondelet street, New Orleans, La., or the mayor at Hazlehurst.

Water-works.—O. A. Metcalfe, recorder, Graham, Va., wants to correspond with manufacturers of pumps and boilers for water-works; also wants prices on tank of from 100,000 to 200,000 gallons capacity.

Well-drilling.—Tennessee-Alabama Oil & Mineral Co., Pulaski, Tenn., wants bids on drilling well for oil on a share basis.

Winery.—Henry Dannehl Company, Fredericksburg, Va., will want apparatus and supplies for vineyard and wine cellar.

Wireworking Machinery.—See "Woodworking Machinery."

Woodworking Machinery.—Peacock Manufacturing Co., Salisbury, N. C., wants to correspond with manufacturers of machinery for making cross-arms.

Woodworking Machinery.—Paris Mattress & Excelsior Co., Paris, Texas, is in the market for woodworking machinery for making cot and bed frames for woven-wire product, also machines for weaving wire, transmission rope, automatic fire extinguisher, cotton fire hose, rubber-lined connection and nozzles.

Woodworking Machinery.—See "Bobbin Machinery."

Woodworking Machinery.—See "Spoke and Handle Lathes."

Woodworking Machinery.—Geo. Giles & Co., Box 225, Ocala, Fla., want barrel stave and heading machinery.

Woodworking Machinery.—Case & Sons, McDonald, Mo., want second-hand planer and matcher, also second-hand resaw.

Woodworking Machinery.—J. G. Powell, Statesville, N. C., wants to correspond with manufacturers of chair machinery.

Woodworking Machinery.—W. T. Pitts, Indianola, Miss., wants prices on shingle machines, bolters, cut-offs, etc.; contemplates buying complete mill, except power.

Woodworking Machinery.—W. S. Chiles, Box 71, Livingston, Ala., is in market for 12-inch molding machine, surfacer with 12-inch bed, planer, 24-inch bed; second-hand in good condition will do.

TRADE LITERATURE.

Morehead Return Trap.—This is a device that will be found highly advantageous wherever steam is used for power, heating, cooking, boiling, steaming, drying or other purposes. Hence it may and does enter into the steam equipment in buildings, factories, homes and other classes of structures. This trap receives the water of condensed steam from whatever source, and automatically delivers it into the boiler at practically the temperature due to the pressure at which the steam is condensed. The reasons for removing condensation from any steam heating or cooking apparatus, and from other steam equipments, will be patent to the steam-fitter and will be found plainly set forth in a leaflet that the American Blower Co. of Detroit, Mich., has issued. The company manufactures the Morehead return trap referred to, and its leaflet thoroughly describes it, aided by illustrations of undoubted clearness.

The Krom Concentrator.—This machine is an extremely efficient, simple and durable apparatus for the separation of valuable minerals from the refuse of their gangues. It effects the separation of concentration of pulverized ore or mineral matter through the highly ingenious application of the pulsations of the air under instant and perfect control. There may be only a tremor of dust which the watching eye can barely see, or a jet sufficient to blow the ore entirely out of its bed. Thus the force is most delicately adjusted to each varying requirement, and adequate to every demand in practice. The frequency of the pulsations or vibrations ranges as high as 900 per minute. Operators who are desirous of knowing further and complete details as to the Krom concentrator are invited to send for an illustrated booklet which the machine's manufacturer has issued. Address the Krom Concentrator Co., Boston, Mass.

1901.

FORTY-SEVENTH ANNUAL REPORT.

OFFICE OF THE NORTHERN CENTRAL RAILWAY COMPANY.

Baltimore, Md., February 17, 1902.

To the Stockholders of the Northern Central Railway Company:

The Board of Directors herewith submit their report for the year ending December 31, 1901, with such data relating to the lines embraced in your System as will give a clear understanding of their physical and financial condition.

The mileage of the System is as follows:

	Miles.
Road owned.....	145.41
Lines operated under contract:	
Rockville Branch, Pennsylvania Railroad Company.....	2.33
Lykens Valley Railroad.....	19.29
Shamokin Valley and Pottsville Railroad.....	38.42
Elmira and Williamsport Railroad.....	75.50
Elmira and Lake Ontario Railroad.....	39.61
Total mileage operated under contract.....	235.65
Total mileage operated.....	381.06

GENERAL INCOME ACCOUNT

For the Year Ending December 31, 1901, and Comparison with Year 1900.

ALL LINES OPERATED DIRECTLY BY THE NORTHERN CENTRAL RAILWAY CO.

	1901.	1900.	Inc. or dec.
Earnings:			
From freight traffic.....	\$6,275,571 00	\$6,029,321 75	I. \$246,249 25
From passenger traffic.....	1,488,553 82	1,302,785 82	I. 185,768 00
From express traffic.....	153,064 43	141,157 96	I. 11,906 47
From transportation of mails.....	36,422 25	94,602 37	I. 3,819 38
From miscellaneous sources.....	250,646 48	277,533 69	D. 26,887 21
Gross earnings.....	\$8,266,957 98	\$7,845,411 59	I. \$421,546 39
Expenses:			
For maintenance of way and structures.....	\$1,116,691 42	\$1,033,776 08	I. \$82,915 34
For maintenance of equipment.....	1,367,247 28	1,321,592 63	I. 45,654 65
For conducting transportation.....	3,140,938 50	3,015,599 74	I. 125,338 76
For general expenses.....	130,111 83	125,569 03	I. 4,542 80
Total expenses.....	\$5,754,989 03	\$5,497,537 48	I. \$257,451 55
Net earnings.....	\$2,511,968 95	\$2,347,874 11	I. \$164,094 84
To which add:			
Interest on investments.....	\$491,229 00	\$539,229 00	D. \$48,000 00
Interest account, exchange, etc.....	6,741 12	49,170 16	D. 42,429 04
Interest on equipment.....	23,909 97	30,154 44	D. 6,244 47
Amount received from P. R. R. Co., proportion of loss in operating Elmira and Canandaigua Divisions.....	67,426 50	13,640 07	I. 53,786 43
	\$594,306 59	\$632,193 67	D. \$37,887 08
Gross income.....	\$3,106,275 54	\$2,980,067 78	I. \$126,207 76
From which deduct:			
Interest on funded debt.....	\$507,395 00	\$616,385 00	D. \$108,990 00
Interest on mortgages and ground rents.....	6,743 20	15,466 39	D. 8,723 19
Interest on car trusts.....	16,048 89	19,265 08	D. 3,216 19
Rentals, leased roads.....	423,803 74	509,038 81	D. 85,235 07
Taxes.....	83,179 12	88,796 48	D. 5,617 36
Sundry expenditures.....	9,978 10	9,652 57	I. 325 53
Extraordinary expenditures not properly chargeable to Capital Account.....		397,925 70	D. 397,925 70
Advances to Elmira and Lake Ontario R. R. Co.....	41,108 66	26,832 94	I. 14,275 72
Net income.....	\$2,018,018 83	\$1,297,557 81	I. \$720,461 02
From this net income for the year.....			\$2,018,018 83
the following amounts have been deducted, viz.:			
Dividend of 4 per cent., paid July 15, 1901.....		\$458,490 00	
Dividend of 4 per cent., payable January 15, 1902.....		458,490 00	
			916,980 00
Balance transferred to credit of Extraordinary Expenditure Fund.....			\$1,101,038 83
Amount to credit of Profit and Loss December 31, 1900.....			\$3,345,602 67
Less premium on script redeemed.....			40 00
Balance to credit of Profit and Loss December 31, 1901.....			\$3,345,562 67

CAR TRUSTS.

No series of Car Trusts covering equipment sublet by the Pennsylvania Railroad Company to this Company matured during the year.

Cost of cars sublet from Pennsylvania Railroad Co. under existing series of Car Trusts.....\$183,262 50

Payments made account of the same during 1901.....\$24,148 89

Portion applicable to interest and other charges.....5,822 64

Balance applicable to reduction of principal.....\$18,326 25

Payments account principal made prior to 1901.....18,326 25

Total payments account principal.....36,652 50

Amount of certificates outstanding December 31, 1901, covering 270 cars sublet to Northern Central Railway Company.....\$146,610 00

The following statements show the percentage of operating expenses to earnings, and the volume, earnings and cost of movement of the freight and passenger traffic:

PERCENTAGE OF OPERATING EXPENSES TO EARNINGS.

1901. 1900. Decrease.

69.61 per cent. 70.07 per cent. 0.46 per cent.

TONS, TONNAGE MILEAGE AND FREIGHT-TRAIN MILEAGE.

	Tons moved.	Tonnage mileage.	*Freight-train mileage.
1901.....	16,154,552	1,076,723,828	2,657,064
1900.....	17,032,280	1,095,285,388	5,822,527
Decrease.....	877,728	18,571,560	96,463
Percentage of decrease.....	5.15%	1.70%	3.50%

AVERAGE EARNINGS, EXPENSES AND NET EARNINGS PER MILE.

	Per ton per mile.	Per freight-train mile.
	Comparison with 1900.	Comparison with 1900.
	1901. 1900. Increase. Percentage of increase.	1901. 1900. Increase. Percentage of increase.
Earnings.....	0.583 0.033 6.00	236.188 17.221 7.36
Expenses.....	0.406 0.014 3.57	164.544 8.636 5.54
Net earnings.....	0.177 0.019 12.03	71.644 8.585 13.61

*NOTE.—Train mileage represents mileage of freight and passenger trains only, all helping, shifting or work-train mileage and mileage made by engines and cabooses without cars being excluded.

The coal tonnage of the main line in 1901 was 6,836,252 net tons, and in 1900, 5,616,290 net tons, an increase of 1,219,962 net tons.

The total coal tonnage to Baltimore was 1,131,614 net tons, a decrease of 41,437 net tons.

The coal tonnage of the Lykens Valley Railroad was 621,340 net tons in 1901, and in 1900, 580,254 net tons, an increase of 41,086 net tons.

The coal tonnage of the Shamokin Division was 2,584,916 net tons, and in 1900, 2,306,833 net tons, an increase of 278,083 net tons.

The aggregate movement of bituminous coal was 2,949,595 net tons, a decrease of 597,008 net tons, and of anthracite coal 5,184,736 net tons, an increase of 279,777 net tons as compared with the previous year. The tonnage of both classes amounted to 8,134,331 net tons, as against 8,452,162 net tons for the preceding year, being a decrease of 317,831 net tons in the actual aggregate of coal transported, irrespective of the number of divisions over which it was moved.

The amount of grain received at the elevators at Canton was:

1901.....	13,761,574 bushels.
1900.....	18,456,050 "
A decrease of.....	4,694,476 "

The amount of grain received at the local elevator, No. 2, in the city of Baltimore during the year was 2,213,429 bushels, as against 2,006,036 bushels in 1900.

The principal items of tonnage, besides coal and grain, were lumber, iron ore, manufactures of iron, and petroleum.

PASSENGERS, PASSENGER MILEAGE AND PASSENGER-TRAIN MILEAGE.

	Passengers moved.	Passenger mileage.	*Passenger-train mileage.
1901.....	4,628,033	68,250,577	1,829,180
1900.....	4,321,459	59,520,774	1,657,000
Increase.....	306,574	8,729,803	172,180
Percentage of increase.....	7.09%	14.67%	10.39%

AVERAGE EARNINGS, EXPENSES AND NET EARNINGS PER MILE.

	Per passenger per mile.	Per passenger-train mile.
	Comparison with 1900.	Comparison with 1900.
	1901. 1900. Increase. Percentage of increase.	1901. 1900. Increase. Percentage of increase.
Earnings.....	2.181 D. 0.008 0.37	99.259 I. 1.123 1.14
Expenses.....	2.026 I. 0.002 0.10	75.605 I. 2.909 4.00
Net earnings.....	0.155 D. 0.010 6.06	23.694 D. 1.786 7.01

*NOTE.—Train mileage represents mileage of freight and passenger trains only, all helping, shifting or work-train mileage and mileage made by engines and cabooses without cars being excluded.

GENERAL REMARKS.

There was a decrease in the movement of tonnage, the aggregate on all divisions being 16,154,552, as against 17,032,280 tons in 1900, a decrease of 877,728 tons. There was, however, a smaller percentage of decrease in the ton mileage, and by reason of a slight improvement in rates, there was a satisfactory increase in both the gross and net revenue from the freight traffic. There was a slight decrease in the gross and net revenue per passenger per mile, but on account of a decided increase in volume and mileage, there was a marked gain in the revenue therefrom.

There was an increase in expenses in all departments, but the net operating earnings show a gain of \$164,094.84. These earnings were augmented by the income from investments and miscellaneous sources, so that the aggregate net revenue for the year was \$3,106,275.54.

After providing for fixed charges, taxes, rentals of leased roads and other liabilities, the net income was \$2,018,018.83, out of which dividends of 8 per cent. were paid, leaving a surplus of \$1,101,038.83.

As a large outlay will be necessary in improving the grade and alignment of your main line south of Harrisburg, increasing your pier and other terminal facilities at Baltimore, and in providing additional sidings and other tracks at various points, it has been deemed wise to transfer this surplus to the Extraordinary Expenditure Fund.

The Extraordinary Expenditures for the year aggregated \$359,513.45, and were charged against the special fund appropriated out of the income of the year 1900. The items were as follows:

Improvement of Canton Yard and construction of new pier, 120x334 feet.....	\$130,687 48
Sidings and Bridgeport Y.....	53,275 32
Undergrade bridge at Marysville.....	24,000 00
Additional sidings and tracks at Clark's Ferry, Fisher's Ferry, Hanover Junction and other points.....	91,314 31
Sundry expenditures, covering water supply, telegraph line, shop tools and other items.....	48,212 06
Right of way, less credit for property sold.....	11,424 28
Total.....	\$359,513 45

This charge left a balance remaining in the fund against the appropriation of 1900 of \$254,011.36, which, with the amount appropriated from the earnings of the past year, \$1,101,038.83, makes the total credit to the fund as of December 31, 1901, \$1,355,050.19.

The work of eliminating the grade crossings on the Union Railroad in Baltimore, and improving its alignment, was further continued during the year, the cost thereof being paid out of the current assets of that Company.

The replacement of wooden bridges by steel and other structures better adapted to your heavy traffic and equipment, was further continued. Extensive improvements are under way on the tracks and yard at Marysville, and the necessary work is progressing at Bridgeport to improve the connection with the Cumberland Valley Railroad at that point.

There was a net increase of fifteen and one-half miles in company tracks and sidings. There were 6877 tons of new steel rails and 237,157 ties used in repairs and renewals, and additional sections were ballasted with stone and cinder.

Six locomotives having been sold, cut up, or condemned, were replaced by standard power. Five baggage cars, four baggage-mail cars, and seven baggage-express cars were built, and nine second-hand passenger coaches and seven second-hand combined passenger-baggage cars were purchased from the Pennsylvania Railroad Company, to fill vacancies created in the passenger car equipment. One hundred and forty-four box (including one Car Trust car), two hundred and eighty gondolas, one gondola and two flat stone cars, and eighteen cabin cars were built to replace cars destroyed or sold.

In accordance with the terms of the Consolidated General Mortgage, the amount of bonds outstanding thereunder was reduced July 1, 1901, through the provision of the Sinking Fund, by the drawing of \$176,000 of securities issued under Series A and B of that mortgage, and this reduction appears in your General Balance Sheet.

The 7 per cent. bonds of the Shamokin Valley Railroad Company, which were endorsed jointly by your Company and the Philadelphia & Erie Railroad Company, amounting to \$2,000,000, having matured July 1, 1901, were paid off, and a new mortgage created, securing a like amount of 3½ per cent. bonds running thirty years from that date.

The leases of your elevators Nos. 1 and 3, Canton, Baltimore, to the Baltimore Elevator Company having terminated December 31, 1901, a new lease was made therefor to the Central Elevator Company of Baltimore City, which is operated under your management.

Under the provisions of the Pension Department there were carried on its rolls at the end of the year one hundred and twelve employees, and the compensation paid during the year amounted to \$23,924.30. Experience has demonstrated that a larger percentage of employees between the ages of sixty-five and seventy will probably avail themselves of the privilege of retirement than appeared to be the case when the Fund was created, and with a view of providing fully for this contingency, the authority of the shareholders will be asked for increasing the maximum appropriation to the Fund to \$40,000 per annum.

It is with the deepest regret that the Board have to record the death of one of their oldest and most honored members, Mr. Benjamin F. Newcomer, who died at his home in Baltimore on the 30th of March, 1901. With the exception of a brief interval between 1874 and 1878, Mr. Newcomer had been a Director of the Company from 1862 until his death. He was the Chairman of its Finance and Real Estate Com-

mittees, and was practically one of its executive council. His sound judgment, financial ability and high standing in the business community made his services of exceptional value to the Company, while his personal traits of character won the affectionate regard of his associates. His long and close connection, not only with your Company, but with the other lines in which you are interested, makes his loss one to be deeply deplored. Mr. Samuel Rea was elected a Director to fill the vacancy caused by Mr. Newcomer's death.

Mr. R. H. Newbern was appointed Assistant Superintendent of the Insurance Department January 1, 1901. Mr. Arthur Hale having resigned the position of Superintendent of Telegraph, Mr. C. M. Sheaffer was appointed to fill that vacancy July 1, 1901.

Mr. Robert H. Groff was appointed Assistant Treasurer of the Company, with office in New York, to take effect January 1, 1902.

The work of auditing the joint business of your Company with other lines has for a number of years past been necessarily performed at the General Office of the Pennsylvania Railroad Company in Philadelphia, and it was deemed best for the efficiency and economy of the service to make the following appointments under the revised organization adopted January 1, 1902:

R. W. Downing, Comptroller; M. Riebenack, Assistant Comptroller; J. D. Greene, Auditor of Disbursements; E. A. Stockton, Assistant Auditor of Disbursements; Jefferson Justice, Auditor Freight Receipts; H. C. McKeever, Assistant Auditor Freight Receipts; O. A. Kupe, Auditor Coal Freight Receipts; A. J. Gillingham, Auditor Passenger Receipts; Samuel Anderson, Assistant Auditor Passenger Receipts.

Your Board desire to express their appreciation of the efficiency and fidelity shown by the officers and employees in the discharge of their duties during the past year.

By order of the Board,

A. J. CASSATT,
President.

FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters. Items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Flourishing State Banks.

Each year the New York Financier issues a supplement containing what it calls the annual roll of honor of the State banks in the United States. The roll this year contains the names of 235 banks of a commercial character, and includes only those institutions reporting surplus and profits in excess of capital. Upon this roll the Wells, Fargo & Co. Bank of San Francisco stands first, with a capital of \$500,000, with surplus and profits of \$1,061,290, and with percentage of surplus and profits to capital of 1812.26; the Farmers' Bank of Nansmond of Suffolk, Va., second, with capital of \$20,000, surplus and profits \$313,630, and percentage of surplus and profits to capital 1568.15; and the Fifth Avenue Bank of New York city third, with capital of \$100,000, surplus and profits \$1,407,895, and percentage of surplus and profits to capital 1407.89. There are forty-eight Southern banks upon the roll of honor.

Cotton Duck Bonds.

The Mt. Vernon-Woodberry Cotton Duck Co. has decided that there is no income applicable to the payment of interest on its income bonds as of December 31, 1901, but the interest on its first mortgage 5 per cent. bonds will be paid as usual. The United States Cotton Duck Corporation decided not to pay any dividend on its preferred stock, at least until the corporation had existed a year. Although the report of the Mt. Vernon-Woodberry Company shows that it could have paid interest on the incomes, it was deemed only conservative to take the action agreed upon.

New Corporations.

The Adrian (Ga.) Banking Co. has been organized, with \$25,000 capital.

A dispatch from Leonardtown, Md., says it is proposed to establish a bank there.

The Guthrie (Okla.) Savings Bank has been chartered, with a capital of \$25,000, by Horace Speed and others.

The McComb Loan & Investment Co. of McComb City, Miss., has been incorporated, with a capital of \$20,000.

The Wellston Bank of Wellston, Mo., with \$25,000 capital, has been incorporated by J. T. Lucas and others.

The High Point (N. C.) Loan & Trust Co. has been organized, with W. H. Regan, president, and John A. Lindsay, sec-

retary and treasurer; capital stock \$10,000.

The Mercantile Trust Co. of Little Rock, Ark., has been incorporated, with \$250,000 capital, by H. L. Remmel and others.

The Southern Trust & Banking Co. of New Orleans, La., has been chartered, with \$1,000,000 capital, by William P. Brown and others.

A charter has been issued to the Wellston (Oklahoma) National Bank for twenty years. The incorporators are Ora N. Penney and others.

Application has been made for the charter of the Baxley Banking Co. of Baxley, Ga., with a capital stock of \$30,000, by C. W. Deen and others.

The Merchants and Farmers' National Bank of Carthage, Texas, to be organized by E. S. Woodfin of Shreveport, La., and others, has been approved; capital \$25,000.

The Beaumont Securities Co. of Beaumont, Texas, has been chartered, with a capital of \$40,000, its purpose being to organize an exchange, with authority to deal in mining stocks.

New Securities.

Lee county, Texas, is to issue \$37,000 courthouse refunding bonds.

Breuhm, Texas, is considering the issue of \$15,000 of 4 per cent. bonds for erecting a City Hall.

A vote will be taken at Victoria, Texas, at the April election on the issue of \$7000 of 4 per cent. water bonds.

The Mississippi legislature has passed an act authorizing the governor to issue \$1,000,000 of new capital bonds at interest not exceeding 4 per cent.

The county commissioners at Tampa, Fla., will sell bonds amounting to \$400,000, negotiations for the sale of which will be closed as soon as possible.

The city council of Navasota, Texas, has ordered issued \$15,000 of City Hall bonds recently voted. City Attorney Lewis has charge of their negotiation and sale.

The Montgomery city council has rejected all bids for the \$75,000 worth of general improvement bonds, and the mayor and finance committee have been instructed to ask for other offers.

Financial Notes.

The total subscription to the Galveston breakwater bonds now amounts to \$959,300.

The Stephenville (Texas) National Bank has increased its capital from \$50,000 to \$100,000.

The Texas Bankers' Association is to hold its eighteenth annual convention at Galveston on March 20 and 21.

It is reported that the bank at Parkesley, Va., will be converted into a national bank, starting with a capital of \$25,000.

William H. Dittman has been elected president of the Germania Trust Co. of St. Louis, vice Joseph Dickson, resigned.

W. B. Rogers has been elected president, and W. H. Grider, Jr., cashier, of the Chickasaw Savings Bank & Trust Co. of Memphis, Tenn.

The Loan and Exchange Bank of Columbia, S. C., has increased its capital stock from \$150,000 to \$300,000, and has given notice of merger with the Central Bank.

It is reported that the commissioners of New Hanover county, North Carolina, have ratified the sale of \$50,000 4½ per cent. good-roads bonds to John S. Armstrong.

State Treasurer Folk of Tennessee has contracted for the purchase of \$100,000 of State bonds to be delivered before April 10 at 96¼ cents, with interest. This purchase will make the amount retired by the sinking fund since its creation \$807,000, and Treasurer Folk is quoted as stating that before the end of this year \$1,000,000 of the bonded debt of the State will be wiped out.

SOUTHERN COTTON MILL STOCKS

Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for Week Ending February 25.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.)	75	91
Aiken Mfg. Co. (S. C.)	95	95
American Spinning Co. (S. C.)	105	105
Anderson Cotton Mills (S. C.)	125	125
Arkwright Mills (S. C.)	120	120
Augusta Factory (Ga.)	72	72
Avondale Mills (Ala.)	82½	82½
Belton Mills (S. C.)	101½	101½
Bennettsville Mfg. Co. (S. C.)	85	95
Cabarrus Cotton Mills (N. C.)	125	125
Clearwater Bleby. & Mfg. Co. (Ga.)	100	103
Clifton Mfg. Co. (S. C.)	175	175
Clinton Cotton Mills (S. C.)	120	120
Courtenay Mfg. Co. (S. C.)	120	120
Darlington Mfg. Co. (S. C.)	85	85
Eagle & Phenix Mills (Ga.)	100	100
Enoree Mfg. Co. (S. C.)	84	85
Enterprise Mfg. Co. (S. C.)	90	95
Gaffney Mfg. Co. (S. C.)	107½	110
Granby Cotton Mills (S. C.)	97	97
Granby Cotton Mills (S. C.) 1st Pfd.	101½	101½
Granville Mfg. Co. (S. C.)	165	172
Greenwood Cotton Mills (S. C.)	100	100
Grendel Mills (S. C.)	102½	102½
Henrietta Mills (N. C.)	200	200
King, John P., Mfg. Co. (S. C.)	95	98
Langley Mfg. Co. (S. C.)	109	115
Laurens Cotton Mills (S. C.)	145	145
Lockhart Mills (S. C.)	100	100
Louise Mills (N. C.)	100	100
Lynchburg Cotton Mills (Va.)	125	130
Lynchburg Cotton Mills (Va.) Pfd.	145	150
Manchester Cotton Mills (S. C.)	109	109
Mayo Mills (N. C.)	150	150
Newberry Cotton Mills (S. C.)	116	116
Odell Mfg. Co. (N. C.)	96	100
Orr Cotton Mills (S. C.)	102½	102½
Pacolet Mfg. Co. (S. C.)	185	195
Pelzer Mfg. Co. (S. C.)	170	170
Piedmont Mfg. Co. (S. C.)	125	125
Poe, E. W., Mfg. Co. (S. C.)	125	130
Richland Cotton Mills (S. C.)	102	102
Richland Cotton Mills (S. C.) Pfd.	101	101
Ronoake Mills (N. C.)	90	100
Sibley Mfg. Co. (Ga.)	72	74
Spartan Mills (S. C.)	135	135
Trion Mfg. Co. (S. C.)	120	120
Triumph Mills (S. C.)	125	125
Union Cotton Mills (S. C.)	125	125
Union Cotton Mills (S. C.) Pfd.	100½	104
Victor Mfg. Co. (S. C.)	103	112½
Warren Mfg. Co. (S. C.)	97	100
Warren Mfg. Co. (S. C.) Pfd.	105	105
Washington Mills (Va.) Pfd.	100½	103
Whitney Mfg. Co. (S. C.)	115½	120
Wilmington Cot. Mills (N. C.) Pfd.	100	100
Wiscasset Mills (N. C.)	115	125

TRADE LITERATURE.

Paragon Fan Prices.—The General Incandescent Arc Light Co. of New York is issuing a mailing card calling attention to its Paragon fan, and invites prospective buyers in this line to write for samples and prices.

Specialties for Sewer Contractors.—This line comprises appliances and tools that are to the advantage of the sewer contractor in his chosen work. Successful use during several years has demonstrated the advantages which these products give their owners. The patent extensible trench brace is the principal device named in the line, for illustrations and description of which see the catalogue issued by the Dunn Manufacturing Co., 600 German National Bank Building, Pittsburg, Pa. This company manufactures the brace mentioned, together with other specialties for sewer contractors, and is prepared to correspond with contractors who are looking for improved methods and appliances to further the economies of sewer work which competition is demanding.

Hornsbly-Akroyd Oil Engine.—This machine is one of the most successful of its class ever offered to a power-using public. The fact that over 8000 of them are in use speaks vol-

TABLE OF CONTENTS.

EDITORIAL:	Page.
Sanity in Mississippi.....	87
For Practical Education in the South.....	87
Hints for American Commerce.....	87
Our Twentieth Anniversary Number.....	88
West Virginia Making Rapid Strides.....	89
The Southern Farm Magazine.....	87
Many Orders for Cars.....	91
The Beaumont Oil Field.....	91
Immense Water-Power.....	91
The Virginia Polytechnic.....	91
FOREIGN TRADE:	
A Question from Melbourne.....	92
Opportunities in Russia.....	92
City Improvements at Ponce.....	92
American Coal at Coburg.....	92
Huntsville Notes.....	92
RAILROADS:	
Northern Central's Report.....	92
Into the Timber Land.....	92
The Atlanta Viaduct.....	92
Not Yet Chartered.....	92
Western Maryland Report.....	92
To Become Standard Gauge.....	92
Railroad Notes.....	92
TEXTILES:	
To Make Textiles Air and Water Proof.....	93
The New Departure at Gaffney, S. C.....	93
A \$15,000 Knitting Plant.....	93
The Cotton Movement.....	93
A Complete Cotton Plant.....	93
Another Cotton Mill at Anniston.....	93
Will Manufacture Knit Goods.....	93
Textile Notes.....	93
Quotations of Cotton Yarns.....	94
Cottonseed-Oil Notes.....	94
Developments at Clarksburg, W. Va.....	94
PHOSPHATES:	
Phosphate Markets.....	94
Phosphate and Fertilizer Notes.....	94
Literary Notes.....	94
LUMBER:	
Lumber Market Reviews:	
Baltimore.....	95
Charleston.....	95
Savannah.....	95
Mobile.....	95
Beaumont.....	95
Lumber Notes.....	95
MECHANICAL:	
1000-Candle-Power Lighting System (Ill.)	96
Coaling at Sea by the British Admiralty (Illustrated).....	96
A Metal Hose (Illus.).....	96
Trade Notes.....	97
Trade Literature.....	97, 102, 104
CONSTRUCTION DEPARTMENT:	
New Enterprises.....	98
Building Notes.....	101
Railroad Construction.....	101
Machinery Wanted.....	102
FINANCIAL NEWS:	
Flourishing State Banks.....	104
Cotton Duck Bonds.....	104
New Corporations.....	104
New Securities.....	104
Financial Notes.....	104
Southern Cotton Mill Stocks.....	104

umes as to their efficiency and general qualities in giving satisfaction to the modern manufacturer and user of power. The Hornsbly-Akroyd oil engine is an internal combustion engine which burns kerosene. Its maker, the De La Vergne Refrigerating Co. of New York city (foot of East 13th street), claim broadly for it that it is "perfectly safe, thoroughly reliable, up to date in every respect, excellent in design, workmanship guaranteed, the simplest motor in the market." The company's latest catalogue is fully illustrated, and salient and minor points of the engine are told in an interesting manner. Power-users are invited to investigate. A postal will bring you the catalogue.

Last Florida Tour via Pennsylvania Railroad.

The last Pennsylvania Railroad tour of the season to Jacksonville, allowing almost three months in Florida, will leave New York, Philadelphia, Baltimore and Washington March 4.

Excursion tickets, including railway transportation, Pullman accommodations (one berth), and meals en route while going on the special train, will be sold at the following rates: New York, \$50; Philadelphia, Harrisburg, Baltimore and Washington, \$48; Pittsburg, \$53, and at proportionate rates from other points. Returning, passengers will use regular trains until May 31, 1902. Tickets admit of a stop-off at Charleston Exposition on return trip.

For tickets, itineraries and other information apply to ticket agents, or to Geo. W. Boyd, assistant general passenger agent, Broad Street Station, Philadelphia.

Page.

87
87
87

88
89
90
91
91
91
91

92
92
92
92
92

92
92
92
92
92
92
92

93
93
93
93
93
93
93
93
94
94
94

94
94
94

95
95
95
95
95
95

96
ty
96
96
97
102, 104

98
101
101
102

104
104
104
104
104
104

quall-
modern
The
external
rosene.
rating
18th
It is
up to
design,
st mo-
latest
salient
l in an
invited
on the

vania

our of
ulmost
New
Wash-

railway
stations
ile go-
old at
850;
re and
and at
points.
regular
admit
ion on

infor-
o Geo.
essenger
elphia.